THE WOMAN'S FLOWER GARDEN

INDOOR *and* OUTDOOR

Digitized by the Internet Archive
in 2010

http://www.archive.org/details/womansflowergard00kift

Pink Petunias to Welcome You and Climbing Vines to Bid You Bide a While

THE WOMAN'S FLOWER GARDEN

INDOOR AND OUTDOOR

By
JANE LESLIE KIFT

Give fools their gold, and knaves their power;
Let fortune's bubbles rise and fall;
Who sows a field, or trains a flower,
Or plants a tree, is more than all.
—WHITTIER.

NEW YORK
A. T. DE LA MARE COMPANY, INC.
1927

Copyright, 1927, by
A. T. DE LA MARE COMPANY, INC.
All rights reserved.

CONTENTS

Chapter		Page
I.	Soil for House Plants	1
II.	Watering and Drainage	7
III.	Sunshine and Fresh Air	11
IV.	Bugs and Weeds	15
V.	Propagation	22
VI.	Window Boxes	27
VII.	Basket Plants	33
VIII.	Ferns	35
IX.	Foliage Plants	38
X.	Flowering Plants	43
XI.	More About Flowering Plants	48
XII.	The Calla—Fuchsia—Poinsettia	55
XIII.	Summering Your House Plants	59
XIV.	Lawn-making	63
XV.	Early Work in the Border	67
XVI.	Hardy Herbaceous Stock for Permanent Effects	70
XVII.	Iris and Peonies	76
XVIII.	Lilies for Every Garden	83
XIX.	Dahlias and Gladiolus	88
XX.	Asters and Other Annuals	93
XXI.	Larkspur and Sweet Peas	99
XXII.	Roses	105
XXIII.	Canterbury-bells—Pansies—Zinnias and Gilliflowers	113
XXIV.	Chrysanthemums	116
XXV.	Shrubs for the Sunny and Shady Small Gardens	120
XXVI.	Flowering Plants and Ferns for Partially Shaded Places	124
XXVII.	Cultivate Your Garden Constantly	128
XXVIII.	Vines for the Amateur	132
XXIX.	Spring Bulbous Stock	137
XXX.	Your Flower Border in September	144
XXXI.	When the Scotch Plaid Days Are Come	146

AUTHOR'S FOREWORD

HOW we revel in our gardens! We realize the need of the company of friendly flowers and embracing vines to coax our homes out into the open and make them a part of the great outdoors. How we would miss the gay good morning of the daily Rose that has clambered up the trellis to peep in at our window, or the more distant greeting of the Hollyhocks as they peer through the lattice windows of our library. We must have a garden! It may be large or small. It matters not It can surround a low, rambling dream house, or it can be within the confines of a window box. If it be green and preaches the gospel of color and sings its psalm of gladness and has been coaxed into existence by our care it will be a real garden with its high lights and shadows and will exhale an atmosphere of contentment that is sweet and satisfying.

Flowers, like people, are responsive, and will unfurl their most wonderful tints and tones for those who love them. So, if you belong to the amateur class of gardeners who are experiencing for the first the joys of all who follow "the trail of the hoe," do not be discouraged if your first efforts end in seeming tragedies. Remember, we live and learn. The mistakes you made this year you will avoid next year. Each season will bring new problems which you will learn to solve.

To some the bare mention of a garden may mean work, but we who have had our experience forget all about that phase of it when we are in the open, for as George Arnold so beautifully expresses it:

> "In all my autumn dreams
> A future summer gleams,
> Passing the fairest glories of the present."

We who love our gardens are ever-conscious of the mystery of gradual revealment which keeps us expecting still more and more as the spring rushes into summer and summer fades to autumn, as the days shorten and the frost creeps steadily nearer.

PUBLISHER'S FOREWORD

THE celebrated gardens of the world—how their study fascinates and draws us closer to our own, humble though they may be, for a garden we must have, even though it be on a window ledge or in a sunny corner of the living room.

What gives attraction to the lowliest flower as well as to the most gorgeous bloom? Is it not the innate recognition that in each one is portrayed a handiwork that no effort of man can equal, a subtlety of color that no artist can match and, perhaps above all, that it is a something for us to cherish and protect on account of its innocence and its helplessness.

To assist in the development of "The Woman's Flower Garden," the author has written a book for her fellow women, in which the publishers have full confidence and now bring into the light. Descended from a family of practical gardeners, with a long background of trained observation, and through her writings for the press, weekly advising thousands of women interested in the welfare of their gardens, Jane Leslie Kift was thoroughly equipped for the task.

A. T. DE LA MARE.

GLEN WILD LAKE, N. J.
September, 1927.

PREFACE

THIS little book, that is perhaps a bit more rambling than so many of our worth while garden books, has been written in response to the thousands of requests for a book which have come from the readers of my articles, appearing each day in the newspapers of this country and Canada.

In this book I have tried to solve my readers' problems as they have told them to me. If I have omitted certain varieties it is because my readers understand the particular needs of these plants or because I know that they are not in the remotest way interested in them. If I have devoted more space to other varieties than may seem necessary, I have done so because I know that my readers want this information. I have tried to make this book both practical and stimulating.

The reader with only a plant or a vine or two, the person with a wee garden attached to some window ledge far above the roar of city traffic, or the owner of a suburban garden have all been kept in mind.

If, after reading these pages, you are prompted to sow more seeds or plant more vines, take more intelligent care of your grass plot or perennial border, this book will have fulfilled its mission.

JANE LESLIE KIFT.

Chapter I

SOIL FOR HOUSE PLANTS

AS THE soil provides the nourishment so necessary to all plant life, surely it is of the utmost importance that we give more than a passing thought to its selection.

So many people whose experience with growing plants has been rather limited, pay little or no attention to the soil they use, thinking, no doubt, that any soil will do. Of course most plants will grow in most soils but to get the best results you must in all cases adopt soils that are suited to the particular variety of plants that you may have.

Mixing Soils

If the soil you have at hand does not meet the requirements of your plants, then you will get better results by manufacturing one that will. This can be easily done by mixing other soils or elements of soils. For example, should your soil be too heavy, meaning that it contains too large a percentage of clay, it is a simple matter to add some sand and thus make it light and friable. In doing this always choose coarse, sharp-pointed sand, as a finer sand does not answer for this purpose. Just how much sand you should use must be determined by the quality of your soil. The easiest way to decide on the amount is to mix some sand with it, then take it up in your fingers and squeeze it firmly together. If upon removal of the pressure the soil crumbles and falls apart it is safe to conclude that you have used sufficient and that no more need be added.

Friable Soil

Friable soil is the basis of a compost for nearly all strong rooted plants. Varieties with fine hairlike roots demand a soil containing more loam than clay. In many cases leafmold will suit them better than loam. There are no set rules governing the selection of proper soils. This knowledge must come through personal experience and if you truly love your plants you will soon become familiar with their needs.

Leafmold, which you know is largely composed of vegetable matter, seems because of this to meet all the requirements of many varieties of Begonias and old-fashioned Fuchsias. In the country districts leafmold is usually obtainable, but in cities it is frequently impossible to get it.

Grass Root Soil

An excellent substitute may be found in the soil taken from old sods. Cut the sod with the sharp side of a spade and turn it over. Directly under the grass growing on its surface you will find a layer of dark brown, very fine hairlike roots. Cut away this part and use it in place of leafmold, which can be found only in the woods, where old leaves have drifted into hollows and have lain until thoroughly decomposed. This soil is very fine and mellow, black in color and rich in fertilizing elements. However, the substitute to which I have referred will be found to be almost as good in every way, as the fine roots of the grass are almost as rich in nutritive principles as that of the dead leaves. So if you cannot get leafmold use what is termed "grass root soil," and your plants will never know the difference.

When using either of these soils it will be necessary to add a little sand to keep the soil open and porous, which is so necessary for drainage purposes. A small portion—about a handful to a 6-inch pot—will be quite sufficient, as fibrous soil never becomes hard and compact under the application of water, as do the heavier soils, which are largely clay or loam.

As the soils of different localities differ, it is impossible to set down any fast and hard rules for mixing compost. The method which is followed with the best result is to keep mixing sufficient sand with your soil until it has a tendency to become friable, whether wet or dry.

When Adding Sand

When in doubt about the amount of sand, fill a pot with soil then pour sufficient water over its surface to entirely saturate it. If in a few minutes the water has disappeared and the surface is damp but not muddy, you can feel sure that you have attained the proper consistency. If the mass of soil is a heavy, sticky mass, it will be a sure sign that you should add more sand.

Soil for House Plants

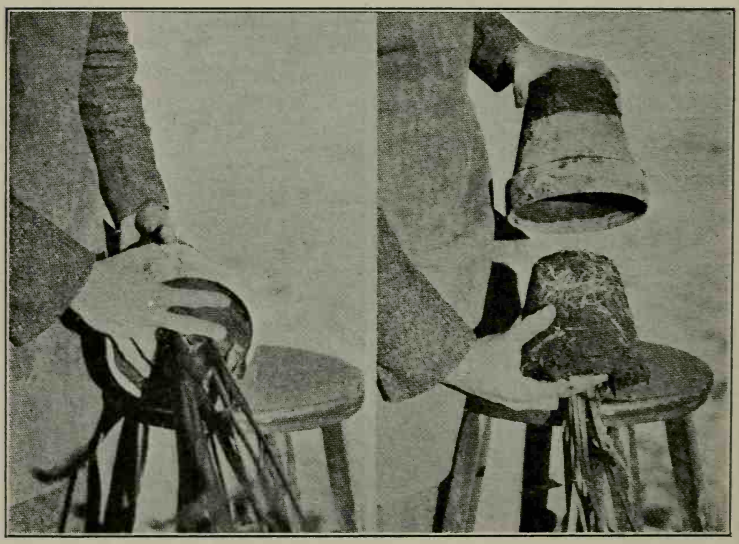
Garden loam is the base of all compost. A soil that is composed of good garden loam, sand and manure (well wetted and chopped fine) is one that is suited to most house plants. Finely ground bonemeal is rich in nutritive qualities and makes excellent plant food, but it must be used with discretion; in fact, it should be considered as a plant tonic and used only when your plants are in need of stimulation. When bonemeal is used, a teacupful to a 4-gallon pail is about the proper amount to use.

Plants with only a few large, strong-appearing roots thrive best in a heavy soil, while varieties with fine, threadlike roots do best in a light, spongy soil. Plants with strong, fibrous roots require a firm soil, but varieties with fine roots cannot penetrate a heavy, compact soil, therefore you must give them a light, friable one.

When in Doubt Examine Roots

Study your plants and always examine their roots when in doubt, and you will experience little difficulty in selecting the soil which best meets their needs.

It is wise to always keep a supply of potting soil on hand. This will enable you to repot a plant at any time. And here let me explain that there is no set rule regarding the time of transplanting your plants, for each plant is a rule unto itself. Some will grow on most happily for months in the same pot, while others will outgrow their quarters every few months. When uncertain as to whether a plant requires more root room, remove it from the pot, being careful to keep the ball of soil



Illustrating Method of Removing Plant From Pot

about its roots intact. This can easily be done where the loam is moist. Merely invert the pot, placing your right hand over the surface of the earth, with the main stem of the plant between the second and third fingers, and gently tapping the rim of the pot on the side of a table or bench. Should you find upon examination a network of fine roots covering the outer sides of the soil you may be sure that a larger pot is

demanded and that at once. If you do not transplant your plant at this time and permit it to live on in a pot which does not admit sufficient soil to provide it with the necessary nourishment you will give a severe check to its development, one from which it will not easily recover. All plants should be kept going steadily ahead.

In transplanting choose a pot one or two sizes larger than the one which you have been using. If you do the work carefully you can repot a young plant without injuring a single rootlet. Simply fill the space between the old soil and the new pot with fresh soil, pressing it down firmly with the fingers and gently jarring the pot a little to make sure that it settles into the empty space. After repotting it is well to water the plant and set it in a partially shaded place for about three days.

When Repotting Old Plants

When transplanting old plants much of the old soil must be crumbled away from the roots. It requires more care to successfully repot an old plant, because you always have to guard against the remotest injury to the older roots, and old plants, like old people, do not recuperate as quickly as do younger ones.

Handle Seedlings with Care

Of course, all young seedlings have fine roots and any injury to them is always harmful. When replanting seedlings handle them as little as possible and always jar the soil into the pots instead of pressing it down with the fingers. It is well to use small pots for seedlings. The size the florists call thumb pots is the size best suited to their needs.

Most young plants require two or three shiftings during the season, while those one year old will do quite well if they are only transplanted once in twelve months.

Never Overpot your Plants

It is a mistake to overpot your plants, overpotting meaning the use of pots that are several sizes larger than the plants demand. It is seldom that a young plant will do well in a large amount of soil, such a condition being equivalent to overfeeding, which sooner or later will cause a plant to become troubled with a condition similar to indigestion. This invariably leads to a general weakening of its constitution, and may in time result in the death of the plant.

On the other hand, plants lacking the necessary root room are always underfed, so it is wise to avoid both extremes. In all cases it is best to let your repotting be governed by the condition of the roots and it is well to always get the necessary knowledge from an examination of the roots rather than by a mere observation of your plants.

Chapter II

WATERING AND DRAINAGE

WHILE plants derive most of their nourishment from the soil, the soil alone will never sustain life. They must, like all other living things, have water. Watering a plant seems like a very simple operation, and it is, but even so, it is one which the amateur rarely knows anything about. Florists tell us that watering is the hardest thing they have to teach new employees.

The Little and Often Plan

There are three ways of watering plants—two wrong and one right way. The first one is the "little and often" plan—watering them whenever you happen to think about it, each time giving a little, which means that the water never penetrates the soil entirely, thus all the roots below the moisture line are sure to suffer (sometimes to such an extent that the plant dies), which in time will cause the plants to have a more or less sickly appearance. This is the worst possible method and is sure to lead to failure for the reason that it does not adequately supply the needs of the plant.

Overwatering

The second one and almost as popular as the first, is the plan of "overwatering"—keeping your plants with "wet feet," the florists term it. You give them a certain amount of water today, then tomorrow you apply the same amount as you did today; the third day you give them an equal amount. This method results in the soil being constantly saturated, so

much so that in a short time it is the consistency of mud. Aquatics are the only plants that will live under such conditions. All others will soon become diseased, for as the water becomes stagnant the soil becomes sour and the roots begin to decay. The cause that prompted this condition still exists, the decay progresses and the plant dies.

The Sane, Sensible Method

As you see, both the above methods are inadequate. Such extremes should be avoided and you should learn to water your plants in a sane, sensible way, which is the only correct way. When you water any plant do it thoroughly, applying enough water to reach every potion of soil in the pot, then wait until this has been utilized before applying more. When you see that the surface of the soil has become dry you can safely consider it a signal that the plant is in need of more water.

Of course, this rule, like all other rules, has its exceptions, but, nevertheless, it is a safe one to follow. While the surface looks damp you may be sure that there is all the moisture necessary in the rest of the soil. If you have had a large and varied experience with plants you may be able to judge the condition of the soil in other ways, but for the amateur this is an easy and practical way, as it is safe to say that no plant, when the soil appears moist, should be given more water.

As I said before, enough should be given each time to thoroughly saturate the soil. If you have provided your pots with the proper drainage any surplus water that the soil cannot take up will run off through the hole in the bottom of the pot.

Proper Drainage

While water is so necessary to plant welfare, almost equally necessary is the providing of proper drainage for all plants growing in pots or boxes. Few amateurs understand this. Many do not even understand what the term implies. You are, of course, familiar with the small, round hole found in the bottom of every flower pot. These holes were designed to

afford an opening through which the surplus water might leave the pot. Above this opening should be placed the drainage, which should be provided to prevent the soil from washing down and thus closing the hole. There should be 1 inch of drainage placed in a 5-inch pot, and from 1 to 2 inches in larger pots. Broken crockery, bits of old flower pots, finely broken bricks or oyster shells all make excellent drainage material. These should be broken into pieces about the size of a marble. Always place a layer of these in the bottom of a pot before you add any soil. Some authorities advise placing some old sod over the drainage to prevent the soil working down between the pieces, but florists never cover the drainage with anything but soil. The idea of drainage is based on a scientific principle and if you ignore it you will never be able to successfully raise plants.

If you do not provide proper drainage your plants will sooner or later suffer from ills that are sure to result from too much water. The soil can only absorb and retain sufficient moisture to provide the necessary nourishment to sustain plant life. If the surplus is not provided with an adequate means of escape it will collect about the roots and decay will be sure to follow.

When in Doubt as to Amount of Water

If you are in doubt as to the amount of water that is actually necessary to saturate the uttermost parts of the soil, examine the hole in the bottom of the pot. If you can detect water exuding from the hole you may be sure that all of the soil is moist.

There is no regular time for watering. It really depends on the rapidity with which the roots of the different varieties can absorb the moisture. Some soils part with moisture more rapidly than others. Then, too, the temperature of the room in which you keep your plants will frequently hasten the process of evaporation.

Some inexperienced persons may be in doubt about the temperature of the water they should give their plants. This

isn't of the least importance. Florists who have thousands of dollars invested in plants and necessarily must grow healthy, well developed specimens, never use anything but ordinary water, attaching their hose to the faucet and using the water provided by the municipal authorities.

Showering Important

When you have learned to water the roots of your plants you have done well, but you have not done all. There are still the tops to be considered. Showering is of the greatest importance, especially so in the case of house plants. Plants in the open border receive twice each day their portion of dew and also have the benefit of frequent showers. House plants have to depend on the generosity of their owners for moisture. When they fail to receive it their leaves turn yellow and fall off and the plants soon become dejected and likely die.

A Rubber Hand Syringe

Every amateur should provide him or herself with a rubber hand syringe, which has been especially designed for the use of those with a few plants. Such a syringe, with its soft rubber bulb, is easily handled and makes the work of caring for a number of plants easy. Of course you can carry your plants to the laundry tubs, but there may be times when you will want to sprinkle them where they are, and in either case a syringe will be most useful. With such an implement you can direct the flow of water where it is most needed.

Applying water in the form of a shower keeps the pores of the leaves, through which the plant breathes, from becoming filled with dust. This is of the utmost importance. When you are sprinkling your plants see that the water reaches the under surface of the leaves, as this is the favorite habitat of most insect enemies and as these pests in general, and the red spider in particular, do not take kindly to moisture, frequent showering will soon cause them to make a hasty departure.

While watering is conducive to perfect health, perfect cleanliness is also necessary to assure bright, lustrous foliage.

Chapter III

SUNSHINE AND FRESH AIR

PLANTS, like most other forms of life, require fresh air and sunshine, but while all varieties require fresh air all are not so particular about sunshine. For example, foliage plants will frequently flourish in a situation having only one hour's sun a day, provided there is plenty of light. Others will flourish when the direct rays of the sun never reach them.

Flowering Plants Demand Sun

Flowering plants, on the other hand, refuse to set a bud or unfurl a single petal unless they receive several hours of sunshine each day. This explains the sudden soaring of the cost of cut flowers. A succession of a few dull days, even in greenhouses where there is a more or less even distribution of light, is sure to result in a dearth of flowers and when flowers are scarce they are always more costly. When purchasing new plants it is always well to consider this question of light and sun. If your rooms are sunny you have a wide choice of varieties from which to choose, but if they are dark, as is so often the way with city rooms, your choice must in all cases be confined to foliage plants.

House with Four Exposures

If you have a house with windows on four sides, be happy, for you can then grow any plants that you may admire, because you will be able to give them the exposure that suits them best.

Unfortunately, in most cities or towns where houses are arranged in rows, there are never more than two available

exposures, which limits your choice. Generally speaking, a southern exposure is the best. Next to this is an eastern one. Some plants can be grown in a western window but they are not apt to do as well as they would in a window facing the south or east. This is due to the intense heat of the afternoon sun.

Foliage Plants for Northern Windows

There are a few varieties of foliage plants, like the Aspidistra, or the English Ivy, that will do well in a northern window, and how a few green growing vines will, like the glow of an open fire, relieve the gloom of a northern room. Some flowering plants, like the Begonias, do not care for strong sunshine, nor, in fact, any sunshine for many hours at a time. They are, therefore, well adapted to an eastern window. Occasionally it is possible to place a conservatory in a southeast angle of a house. When this can be done you surely have an ideal place for plants of all kinds. Here the sun-loving varieties can be placed on tables facing the south and those liking early sunshine may occupy the eastern ones. In this way all will receive the best light throughout the day.

Foliage Must Never Touch the Glass

While plants are usually placed in close proximity to windows in order that they may receive the necessary light, it is a mistake to place them where their foliage rests against the glass, for as the glass has a tendency to attract the heat, it may burn their leaves. Always turn your plants a few inches every day so that the sun will have an opportunity to shine on all sides of them. If you do not do this you will soon notice them becoming one-sided, because being left in one position their branches and foliage are sure to be drawn towards the light, and what a pitiful object a malformed plant is!

One old lady who is unusually successful with her house plants keeps her choicest specimens in a glassed-in porch

opening off the kitchen and laundry. Here the steam from the cooking and laundry tubs keeps the atmosphere moist.

One reason why so many fail to grow plants well is because they keep them in rooms where the air is robbed of its vitality by excessive heat. Plants breathe as people do and you cannot expect them to flourish in air from which all the moisture has been extracted. Such an atmosphere is never a healthy one for either plants or people, and moisture in the air will counteract the evil.

Ventilation

The matter of ventilation presents a real problem in this day of steam-heated houses, for plants demand not only fresh air, but moist air. In the greenhouses temperatures can be regulated and the air can be kept moist, but in the modern living room or sun parlor this is not so easy a matter.

Seventy-five per cent of all failures with house plants can be attributed to dust-laden air. The daily shower bath keeps the pores of the leaves open but in addition to this you must give them more moisture. The most practical way to do this is to keep water evaporating in all artificially-heated rooms.

The necessity of admitting pure, fresh air to rooms where you have growing plants can be readily understood. Never keep your rooms at a temperature of 80 degrees and then open wide the windows directly in front of a group of plants. The sudden chilling of the foliage, which is sure to follow, will affect the plant in much the same way as a sudden and prolonged draft of cold air will affect a person.

The Best Way to Admit Fresh Air

The best and sanest way is to open a window other than the one by which the plants are growing, or, better still, the windows or a door in an adjoining room. This method will enable the cool air to mingle with the warm air of the first room and thus the chill will be taken from it before it reaches the plants.

Never forget the daily shower bath and never forget to admit fresh air in generous quantities and you will be able to grow plants that would be sure to die if these precautions were not taken.

Always keep the soil stirred well, as this permits the air to reach the roots.

Chapter IV

BUGS AND WEEDS

TWO persistent and relentless enemies of all plant life. As soon as the first pair of leaves or cotyledons have pushed open the soil and, satisfied with their surroundings, have given way to the true leaves which all gardeners know are so different in both shape and color, is the time to watch for weeds.

Weeds

Weeds, being rampant growers, require a great deal of nourishment and therefore take a great deal from the soil. As a result, unless you begin to wage aggressive warfare against the weeds, your seedlings, being less vigorous, will soon die from want of nourishment. Few people, who lose their seedlings stop to analyze the cause.

Pulling weeds is necessary, though tiresome work—but cheer up! It is healthful. When we pull weeds we exercise muscles that need it.

Seedlings Must be Thinned

When your seedlings have attained a height of 3 inches, you must begin thinning. This means pulling up every other plant. You may have to repeat this process two or three times. Even so, never be guilty of throwing away a single plant. Give them to someone who has less time, or whose garden ventures may be less successful than yours. Remember that this is one way to make the "City Beautiful Movement" a reality.

Water Seedlings After Sundown

Water your seed beds daily, preferably after sundown if the weather is unusually warm. Protect your beds from the burning rays of the sun while the seeds are germinating. One way to do this is to tack cheesecloth on light racks. This makes a substantial screen and one that will last for several seasons.

Hoeing

Hoe between the rows of your garden once a week. This not only prevents weeds from gaining headway, but it separates the soil into fine pieces which cast shadows and thus protect the lower layers from the strong rays of the sun. Another reason why much hoeing is necessary is because it reduces evaporation of the moisture which must be retained if we would have healthy plants.

Early in the season, while the weeds are small, they can be easily uprooted by hand and in this way you pull weeds only. If you use a hoe too vigorously while the plants are young, you are apt to make a mistake and uproot young seedlings as well as weeds—for, in many cases, weeds and plants are quire similar.

If you keep your garden free from weeds the first six weeks you will have little difficulty the remainder of the season. Weeds should also be uprooted from your shrubbery border and even about the roots of trees. The grass should also be kept away from the roots of young trees. It may surprise some readers to be told that a young tree will actually die where the grass grows close to its base.

Garden Enemies

Garden enemies are legion and would we be victorious in routing these pests, we must be ever vigilant. It is a case of perpetual warfare from the time the first leaf unfolds until the last flower has wilted. If we wait until there is an epidemic of a certain variety, with every plant in our garden covered

with insects, it will be an almost hopeless task to get rid of them; but if we destroy the advance guard, all will be well.

Healthy Plants Rarely Disturbed

One thing to keep in mind is the fact that healthy plants that are developing new growth rarely fall prey to insects. But sickly, stunted plants are sure to succumb.

Kerosene emulsion is the standard remedy against all sucking insects (such as plant lice and scale insects), and is of value against soft-bodied insects which cannot, for various reasons, be poisoned by paris green and similar insecticides.

Kerosene-Soap Emulsion

The best form for ordinary use is the kerosene-soap emulsion, made by combining two gallons of kerosene and one-half pound of whale-oil soap or one quart of soft soap (either can be purchased from the average druggist) with one gallon of water. Some authorities recommend the addition of a quart of milk to this mixture, but I have never been able to see that the milk was much of an addition, except to add to the quantity of the emulsion.

The soap should be dissolved in boiling water and then permitted to cool. Pour this into the kerosene. (Keep the kerosene away from any proximity to a fire!) The mixture should then be thoroughly stirred for 15 minutes, at the end of which time it will be the consistency of thick cream.

Properly prepared, such an emulsion will keep indefinitely. It should be diluted only as needed for use. For most insects, except scale or bark lice, the staple emulsion should be diluted from 15 to 20 parts with water.

To Combat Beetles

To combat beetles, especially the Japanese beetle, the most effective remedy yet found is to spray the affected plants and the soil in which they are planted with a solution of molasses and aresenate of lead. They are enticed to partake of the mixture by the molasses and poisoned by the lead.

For Rose Bugs or Rose Slugs

For Rose bugs and Rose slugs, two bitter enemies of our garden Roses, use a solution of paris green, or a weak solution of arsenate of lead. Spray these solutions over the entire bush, being careful to see that the liquid reaches the under surface of the leaves, as this is a veritable haunt of these enemies. Tobacco is also used to fight the Rose slug, either in powdered form or as a tea.

Treatment for Blight

For rust or blight, the most efficacious remedy is made by dissolving two teaspoonfuls of copper carbonate in one-half teacup of ammonia. Add to this six and one-half gallons of water, and apply this as a spray twice a week, using it full strength.

Worms

It may surprise most readers to be told that worms in the garden rarely do any damage, they are one of Nature's methods of keeping the garden soil open. It has been stated that with the absence of earthworms we would not be able to cultivate the soil. Of course, I refer to the common brown earthworm, not the malicious cutworm, which is an entirely different species.

If, however, your soil does seem to be overpopulated with these crawlers, which to most of us are objectionable, you can purchase from any seed house a worm destroyer. This is usually a liquid which, if sprinkled over the soil, will entice the worms to the surface, when they can be easily collected and destroyed.

A less expensive remedy is to pour limewater over the soil. This does not induce the worms to come into the open but has, rather, the opposite effect. They do not relish lime in any form, so they quickly leave soil in which they discover the slightest trace of it.

Ants

Ants are troublesome in some soils. When they are so numerous as to be really annoying, try and find the cause of their selecting your garden in which to colonize; and when you have succeeded in finding the cause, remove it. Usually it is decayed vegetable matter that entices them. Should that not be the real cause, you can be sure such material will at least encourage the pests.

You can pour boiling water or a few drops of coal oil on a few ant hills and thus destroy them, but where the entire garden is infested it is quite a different matter. The same might be said of drugs which are guaranteed to relieve a lawn of ants. If your lawn is the usual city front grass plot, all will be well; but if your plot is a large one it will require more drugs than you may care to buy.

In such a case the best way to rout the pests is to plough up the ground and thoroughly cultivate it. This will scatter them and destroy their nests. Ants rarely infest an established grass plot. When they do, frequent mowings and still more frequent waterings with a forceful spray of the hose will usually make life so unbearable for them that they will be glad to hunt other quarters.

If you have the courage to undertake the operation, you can rid a grass plot of these pests by the use of bisulphide of carbon. The bisulphide of carbon is a heavy, colorless, volatile liquid. The liquid penetrates the soil and the fumes reach the most remote corners of the ants' runs. Use about one tablespoonful to each nest. After applying liquid press damp soil over the spot. Keep in mind when you are using bisulphide of carbon that it is poison and that it is highly inflammable and that its vapor is really dangerously explosive. Never use it in the presence of a naked flame.

Fortunately plants that are grown in the house are never troubled with weeds but they are just as frequently the prey of insects as are those that are grown in the open. When you take your plants into the house in September they are usually

in splendid shape. The few months of fresh air and sunshine have done them a world of good. They have developed new growth and their foliage stands erect and is what the florists term "self-sustaining," meaning that it does not require staking. You are justly proud of them, but by the middle of October they may appear more or less dejected. You begin to wonder why, when you know how carefully you have watered them. Naturally you are discouraged, and when things are going from bad to worse, apparently from nowhere come all sorts of insects to aid in the final destruction of the plants. But things are never so bad that they might not be worse, so cheer up! The situation is far from hopeless.

Insects Attack Stunted Plants

Your plants are no doubt stunted, due to lack of moisture in the atmosphere and also to lack of fresh air. They have ceased to grow and whenever a plant ceases to develop new growth just that moment it becomes the prey of some insect enemy and in its weakened condition it cannot resist these enemies. The first thing to do under such a condition is to remove your plants to a cooler place, some room where the air can be frequently changed.

Routing Red Spider

The red spider is usually the first insect to arrive in a group of sickly plants. This enemy is easily routed. Merely place the plant on its side in a laundry tub and get out your hand syringe, if you have one, if you haven't, carry the plant to the bath tub and turn on the shower. The water will literally drown the insects and a few such treatments will entirely rid the plant. Always, when spraying, see that the water reaches the under surface of the leaves, as this is the favorite haunt of all insects.

Vanquishing Green Flies

The second insect will usually be the aphis, or green fly, and the third will be the mealy bug. These enemies can soon

be chased away by a few applications of water, coal oil and soapsuds.

When your plants are free from insects, the next step is to keep them free. The only way to do this is by the persistent use of the daily shower, for clean plants kept in rooms that are flooded with light, where the air is pure, are never troubled with insects.

Chapter V

PROPAGATION

PLANTS are propagated in three ways: By division of their roots; from cuttings, which are placed in sand or earth to form roots, and from seeds.

Starting Seedlings

Most garden plants, such as annuals, are grown from seed, which, unless you have the convenience of a hotbed or sash, must be started in the house. This is really quite an easy procedure. All that is necessary is to select a shallow box, about two or three inches deep, and cover the bottom to the depth of two inches with any available drainage, which will serve to take away the surplus water. On top of this layer of drainage place one and one-half inches of good sandy loam. Use about one-third loam and two-thirds sand. Smooth this over evenly and then sow the seeds. Cover them very slightly with soil rubbed between the hands. Next, cover the boxes with glass and keep them shaded with paper until the seeds show signs of sprouting, which will take, with many seeds, from a week to ten days. You can easily tell when the seeds have germinated by the appearance of the tiny sprouts above the surface of the soil.

Keep Seed Box Moderately Damp

Keep your seed box moderately damp and remove the glass for a short time every day, preferably in the early morning, to allow the box to dry out somewhat. When replacing the glass always turn the dry side down. After the seeds germinate the shading can be removed, and after they have grown

somewhat you can return the paper covering during the sunnier hours of the day. After the plants have attained a height of two inches they can usually "go it alone," as the florists say, meaning that they can stand all possible sunlight.

To start seeds in the house, the box should be placed in a light, sunny window in a fairly warm room, with a temperature of about 60 degrees during the day and not much below 50 degrees at night. As soon as the little plants are well started the box should be taken to a cooler room.

Transplanting

In this situation they will harden off, when they should be transplanted into another box or into pots, planting about eight plants in each large pot. Be sure to keep them damp and shaded for a few days after transplanting. After they are well rooted give them air on all days that the weather is suitable. This can be easily done by lowering the window at the top.

Most failures with young seeds in the house, and in the open as well, are due to covering them with too deep a layer of soil after sowing. In many instances merely pressing the seeds into the soil with the bottom of a tumbler is all that is necessary. Press gently but do not pack the soil. It is very important to have your soil in condition to work nicely. Very wet soil is to be avoided for it packs hard and when it dries it bakes and the tender shoots cannot get through.

To Prevent Damping

Seed sowing in the house is extremely interesting work but to be successful needs constant care and attention. Inexperienced persons frequently lose their seeds from damping. This condition is the result of keeping the soil too damp and also from having the seeds sown too thickly. In the beginning it is well to place a layer of newspaper over the young seedlings and water over the paper. The water will gradually filter through the paper and you will prevent the life being dashed out of the young seeds by the forceful stream of water from even the finest nozzle of the watering can.

Propagating from Cuttings

Most house plants, like Geraniums and Begonias, are propagated from cuttings, commonly called slips. A cutting is a branch or a piece of a branch taken from some part of the plant, of recent growth. The length of the cutting depends on the variety of the plant which you are going to propagate. Never use old branches for this purpose, for old wood is usually tough wood, and wood with a thick bark is never favorable to the rapid development of roots. Neither is new growth desirable, as it is so extremely soft that it is apt to start decaying before a callus is formed. A callus, you know, is a hardening of the end of a cutting and is the first stage in root development. Unless a successful callus forms, root development never takes place. A cutting in which the wood is neither very brittle nor very tough is the condition to root well.

Always Use a Sharp Knife

Always cut off any wood from which you mean to make a cutting with a sharp knife. Never depend on breaking it unless it is a branch which can be removed from the parent plant intact, in which case breaking is preferable to cutting. Trim away all but about the three terminal leaves from a cutting. In making a Geranium or Chrysanthemum cutting it will be an advantage to cut away about three-quarters of each remaining leaf. Also cut away the small wings that appear at regular intervals at the base of the leaves. These, if not removed, will eventually die and in a measure retard the rapid development of roots and other growth.

Root Cuttings in Sand

Nearly all cuttings root most readily and rapidly in white, sharp-pointed sand. A cutting bed or pan must be kept damp at all times. Never permit water to collect in the bottom of the vessel. If you do, the cutting will "damp" (start decaying). Keep all cuttings in a warm, light place until after they have rooted.

Some varieties start to develop roots at the end of one week. Others may take from ten days to three weeks, the length of time depending to a large degree on the thickness of the bark. English Ivy and Tradescantia can be rooted in water, in which case it is well to handle the branches as little as possible. All the attention they require is to keep adding more water as the water evaporates. This form of propagation is an interesting process, because you can, if you have them started in clear glass, watch the root development.

Root Divisions

You can increase the stock of many plants by the method known as root division. Ferns, Aspidistras, Asparagus sprengeri and, in fact, some varieties of Begonias which send up stalks in large numbers from the crown of the plant, are all propagated in this way. Merely cut the roots apart with a sharp knife. Usually you should divide a root into three parts. Plant each piece in a pot and always remove any dead foliage. In this way in a few weeks you will have three plants instead of one.

Increasing Oriental Poppies

While the three methods just described are the usual methods employed to propagate plants in general, there are many other ways of increasing the stock of certain varieties, that while a bit different, are just as practical. For example, should you wish to increase your stock of Oriental Poppies—and I can imagine no owner of these gorgeous blossoms who would not gladly have just twice as many—let me tell you how to do it.

Directly after your plant has ceased blooming in July, lift it carefully. I emphasize the "carefully," because when it is brought to the surface all its roots must be intact. These roots may surprise you. They are unlike many roots, in that they are quite fleshy—not unlike young horseradish. Cut these roots into lengths of about two inches, up to within an inch of the heavy, carrot-like root, and plant the pieces

directly in spots where you wish the Poppies to grow, about 2 inches below the surface. By September you will enjoy a healthy plant above the ground wherever you planted a piece of root and the following Spring you will have a fine crop of flowers. You will not have sacrificed the old plant, for, set back into the ground after the thin roots have been removed, it will live on and replenish the parts you have removed.

Increasing Michaelmas Daisies

Should you have a clump of those adorable Michaelmas Daisies in your garden, just lift it in April and you will find that instead of possessing one plant you may have twenty-five perfect little ones, each with a perfect set of roots. If you plant these young plants, allowing at least 2 feet apart each way, they will give you a veritable mass of perfectly formed flowers in the fall as a reward for your care.

Increasing Phlox

Hardy Phloxes can be easily increased. Lift the clump and with the sharp blade of the spade cut the plant into three pieces. Plant each by itself and you will be surprised how in a single season each piece will have developed into a clump the size of the original or parent plant. Iris and Peonies may be increased in the same manner.

It is well, when replanting the divided parts of garden flowers, to start them in rather rich soil. You must also be sure to select a well-drained sunny location for the Peonies and Phlox. The Iris will grow in a partially shaded location.

Chapter VI

WINDOW BOXES

THE last few years we have been fast adopting the English custom of window boxes secured on the outside of the window and filled with suitable growing plants, as a form of summer and early spring decoration of our city and suburban homes.

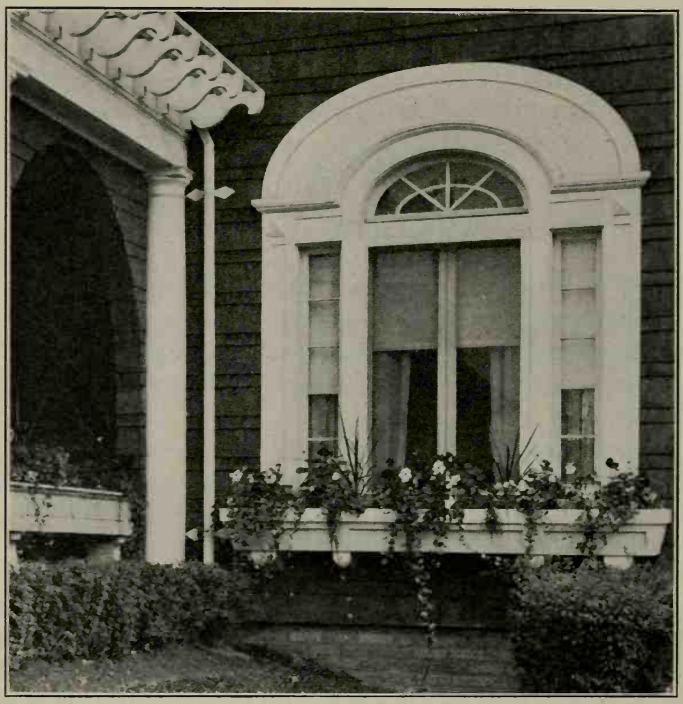
In many places, especially in cities, where we have not only lack of lawn, but little or no yard space, and in some cases not even a porch, we can not only derive pleasure from such window boxes ourselves, but we can give pleasure to our neighbors as well.

A window box, if planted intelligently, is a continued delight all summer and when fall comes you can discard your summer plants and replace them with low growing conifers, or, if money must be considered, fill the box with terminal ends of Laurel, merely sticking the ends into the soil. These will not grow, of course, but they will keep green the entire winter.

Sometimes people discard the Laurel at Christmas and refill the boxes with Holly. Holly in an outside window box will keep fresh for several weeks. Another, and perhaps more novel idea, is to interspace some artificial Poinsettia or small branches of Immortelles among the green. These last two suggestions carry out the Christmas color scheme and lend a happy holiday attire to even the most somber dwelling.

Location of Importance

You must, to be successful, above all else consider the location of your box. If your window faces away from the sun



Color, Balance and Individual Development Were Considered When This Box was Planted

Therefore, it will be more beautiful at the end of the season than it was in the beginning

it will be useless to chose flowering plants of any sort, since flowering plants must have sunlight. Though you procure from your florist the best of soil and the box is filled with the choicest specimens, beautiful when first set out, without sun they will fade and wane just as soon as the first flowers have disappeared. No matter how regularly you may water them or how tenderly you may care for them, they will fail to produce healthy growth or blossoms without plenty of sunlight.

But you do not have to despair of having beautiful boxes because your windows face the north or are shaded by trees

or buildings, for in the window box we really have the idea for beautifying the dreary side of the house. Here your boxes can be filled with plants, which grow vigorously, because thus located they are in their natural habitat. In such a location some plants flourish and are a continual delight from early spring until late fall.

Foliage Plants for Sunless Windows

There are certain varieties of plants with which you can be successful, even if you have had very little knowledge and actual experience in plant growing. The varieties of plants best suited to a sunless location are, strictly speaking, foliage plants, which in their way are just as satisfying and frequently more luxuriant than flowering plants. Crotons, ferns and rubbers, with variegated Vincas to droop over the sides, always make a pleasing combination, and these will always do well in a semi-shady location.

Rich Soil Always Essential

The first essential to a successful window box, be it for the outside or the inside of the window, is rich soil. A good combination is one composed of good garden loam, sand and manure, equal parts. Drainage is the second essential.

Tin Boxes Always Practical

The most economical window boxes for general use, either for outside or inside decoration, are made of tin, painted to match the surrounding woodwork. These boxes are in good taste and are arranged with a drain pan, which is very necessary.

Always, when choosing plants for a window box, consider height. Low growing varieties which do not too greatly screen the window space are the best. Should your windows face the east or south they will be lovely adorned with boxes of salmon Geraniums and blue Lobelias. Or you might like better the scarlet Geraniums and white Sweet Alyssum. While Geraniums are not new or unusual, they are reliable and

require only a minimum amount of care. A daily drink will be all that they will expect. Of course, you know that all plants, no matter where they are planted, must have the dead leaves and blossoms removed. Blue Ageratums and yellow Wallflowers are always pleasing. Usually a box of two, or, at most, three varieties of flowering plants has more charm than a mixed collection of six or eight varieties.

Water Frequently

Window boxes dry out quickly, therefore they should be watered always once, and in prolonged dry spells, twice a day. Foliage plants should have their tops sprinkled every day, as well as their roots well watered.

Pansies, Joyous and Colorful

In the early spring, boxes of Pansies are very colorful and joyous, but when filling a box with these gay little blossoms be careful never to crowd them. Permit plenty of room for root development. It is well to set them about 8 inches apart each way.

Boxes for Interior Decoration

While we are conscious of the decorative possibilities of outside boxes of growing plants, we do not really feel their necessity as we do in the inside of our homes. For here space is so often valuable and you know those versed in the art of interior decorating preach, "Space, look to your spaces," and "consider vistas." The last phrase surely applies to the window box, for what could be lovelier than an expanse of blue sky, a few fleecy white clouds and, in the foreground, a row of lacy ferns? The vista described is that of the upper floor window, and the foreground, so essential to its beauty, is easily provided. Grace Hazard Conkling expresses this beautifully:

> "O sudden urging sweetness in the air
> Exhaled, diffused about one everywhere,
> Vanished summer sigh upon your breath."

Never scatter your plants about your rooms on low tabourets. Such an arrangement is neither artistic nor practical. The plants arranged in a box require less care, a fact to be considered in this day of maidless housekeeping.

Plants Do Well in Boxes

The strongest argument in favor of the window box is the fact that plants are almost sure to do well in such a location. You see, the box being close to the window, always receives a maximum amount of sun, which is so necessary to plant life.

There is a rather more limited choice of plants for interior boxes than for those in the open. The Begonia is always a happy choice, for, like the Geranium, it is reliable. It is almost sure to do well in an eastern window. Primroses will usually do well in a southern window. Wallflowers will lend a golden note to a window facing the south. The old-fashioned yellow Oxalis makes a worth while plant for a window box. For the northern window you must confine your choice to foliage plants. For a narrow windowsill I would suggest a box of Pteris ferns, especially if you choose some of the variegated varieties. They are always worth while and their beauty can be enhanced if you plant a few variegated Vincas (commonly known as trailing Periwinkle) in the front of the box. The Pteris ferns are all dwarf varieties and exceedingly feathery.

Suggestions for a Sunny Window

Should you want a really attractive box of growing plants for a sunny window and feel that you cannot afford to purchase the necessary plants to make it a real thing of beauty, let me suggest that each morning when you prepare your grapefruit, you carefully save the seeds, laying them on a plate and drying them in the sun. When you have a sufficient number plant them in your window box. Set them an inch and a half apart each way. Keep them moist, never wet, while they are germinating. In a few weeks you will notice that they are

beginning to peep up above the soil and in less than two weeks you will have a box of the most shining foliage that you ever saw. Such a box will cost nothing except your labor and will be a real joy the entire winter.

Wee, Curly Parsley

A second suggestion which will cost very little is to sow a box with Parsley seed. Parsley plants are among the most beautiful of foliage plants. The leaf of the little herb is most "wonderfully and beautifully made." It is fluted so closely that it resembles a series of rosettes. It has rather thick foliage which in a few weeks will completely hide the soil. A window box of Parsley is really beautiful and well worthy a place in any room. You can keep thinning out the leaves for kitchen use without in the least injuring the plants.

Chapter VII

BASKET PLANTS

WE can all remember the time and attention our grandmothers devoted to the care of their wire hanging baskets; then for a long time these baskets seemed to be forgotten. Even the florists ceased to grow vines suitable for filling baskets; but in the last few years there has been a revival of the hanging basket. The Japanese became responsible for its return to popularity by sending us such attractive hand-made baskets, made by the people of the country districts from the rushes which grow about the edge of their rice fields during the months they are waiting for the rice to attain the height necessary before cultivation. These baskets are designed along artistic lines and stained in softest woodsy tones.

Baskets Lend Added Charm

One of these baskets, when filled with growing ferns or trailing vines, is always irresistible and lends charm to any porch or living room.

Choose Plants That Will Withstand Dry Air

We have only a limited choice of plants for this purpose as the hot, dry air of the house forbids the growing of many plants in baskets that usually flourish out of doors during the spring or summer months, so if you would have your basket fulfill its mission, you must consider not varieties you want or those you think attractive, but those that are suitable. Plants for hanging baskets must necessarily be able to withstand a dry atmosphere. A basket hanging in a sunny window of a warm room dries out very rapidly and in most cases needs about twice the quantity of water usually given, therefore it is

useless to attempt to grow soft flowering plants or trailers. Even if they should withstand the droughts, they would soon be attacked by insects.

Proper Soil

To be successful with a basket the soil must be just right. One composed of one-half part good garden loam, and one-quarter part each of sand and manure, is most satisfactory. The whole should be thoroughly pulverized and mixed before using.

Never attempt to grow a variety of plants in one basket. One variety makes a more pleasing effect. Moreover, unless a basket is very large, there is never sufficient root room to sustain in full vigor a variety of strong growing vines.

Sedums a Wise Choice

Sedums are easily grown because they will stand lack of attention, which is the usual fate of most plants suspended in a warm room; they make admirable basket plants. Kenilworth Ivy and Tradescantias are both suitable for growing in baskets. For a large basket choose a fern. The Scotti, or Boston, are well suited for this purpose. These varieties are not unusual. They are, in fact, quite common, but they are absolutely reliable and, after all, that is what counts.

Such a basket requires room. It should never be placed where the fronds of the ferns will touch the glass.

Chapter VIII

FERNS

EACH year more and more ferns are being raised, which means that more and more ferns are being purchased and taken out of greenhouses, where conditions for these lovely feathery natives of the silent places are as near ideal as intelligent care can make them, and carried into homes where conditions are just the opposite.

Of course, in the beginning all will be well. You purchase a fine healthy Boston or Scotti fern about October 1st and place it in your living room, and then, well, you water it more or less regularly; if wee Elizabeth has the measles, or you have extra company, probably less. About the first of November you will notice that the ends of the fronds are beginning to turn brown. A month later you will notice that the new growth which the florist probably showed you in October has ceased to develop. Then, in early December, you notice that the mid-stem of the frond is covered with tiny, hard brown mounds. The entire plant looks dejected and you decide to discard it, with, possibly, the remark, "I never did have any luck with house plants!" And here, in reply, let me suggest that luck when it comes to caring for house plants, is the most undependable of all aids to gardening.

Growth an Indication of Health

When you purchased your fern a few months ago it was laden with perfectly developed fronds. Not only this, but a dozen or more new fronds were pushing their heavy heads up to the light, which always indicates a healthy plant. Now all

is changed and this change did not happen without a reason. Until you purchased it the plant had received systematic care. It had been growing in a house lighted on all sides—a place where temperatures were taken twice a day and where it was regularly watered and cultivated. Suddenly removed from this environment so well suited to its needs, brought into your steam-heated apartment and after that not even watered properly—is there any wonder that the fern, as if resenting the change, became ill?

Maidenhair Fern Unsuited for House Culture

In nine cases out of ten, when your fern begins to turn brown at the end of the shoots and the new fronds cease to unfold, the fault is yours. You either have selected a variety with a constitution too delicate to withstand the dry, hot air of the modern steam-heated living room, or you have been guilty of absolute neglect. For example, take the maidenhair fern. It is as sensitive as a violin. In a greenhouse, where temperature, moisture and ventilation can be regulated to suit its very definite requirements, it is a real joy, but in any other situation it shows its resentment. "Nuf said!" Indifferent, half-dead plants are always unsightly.

The Big Three

Now, there are three varieties of ferns that are known as "The Big Three." The florists are justly proud of these varieties, which are the result of years of labor, to say nothing of the gray matter that they have expended in their propagation. Scotti, Teddy Jr., and Boston are their names. With any of these it is different. Their constitutions are sturdy, and if ten minutes a day is regularly devoted to their care they will continue to fulfill their mission and lend atmosphere to their surroundings. "Ten minutes a day regularly devoted to their care." I hope that you will not skip the "regularly," for with that word omitted, you will accomplish little, even with one of these "Big Three" whose cause I am so ready to champion.

Plants Are Responsive

You know what would happen if you fed and bathed your baby today and tomorrow didn't go near him, and on the third day fed him double and bathed him twice. Plants are as responsive as children. If you overfeed them or neglect to bathe them they become ill and soon develop symptoms of disease. Brown ends of fronds and the drooping of leaves are the sure symptoms.

Sprinkling the Foliage

Each morning carry any of these varieties to some convenient place, such as a laundry tub; sprinkle the foliage and give water to its roots, then it will take only a minute to remove any scale which may have attached itself to the midrib of the fronds. These can be easily removed when there are only one or two on the plant, but if you permit them to collect you will be unable to remove them and will be compelled to cut the plant back to its roots to eradicate the pests. After the plant is clean, fill the tub with water to a depth where it overflows the rim of the pot, and in this water permit the pot to remain five minutes. This you need do only every other day. The water received from the showering of the foliage will be sufficient for the in-between days.

Ventilation

If, in combination with this treatment, you change the air in the rooms once a day, there is every reason why, when May comes, you will have larger, finer ferns than you had in October.

Chapter IX

FOLIAGE PLANTS

HOW we would miss our foliage plants! They seem to fill a niche all their own in our homes, especially during the colder months of the year.

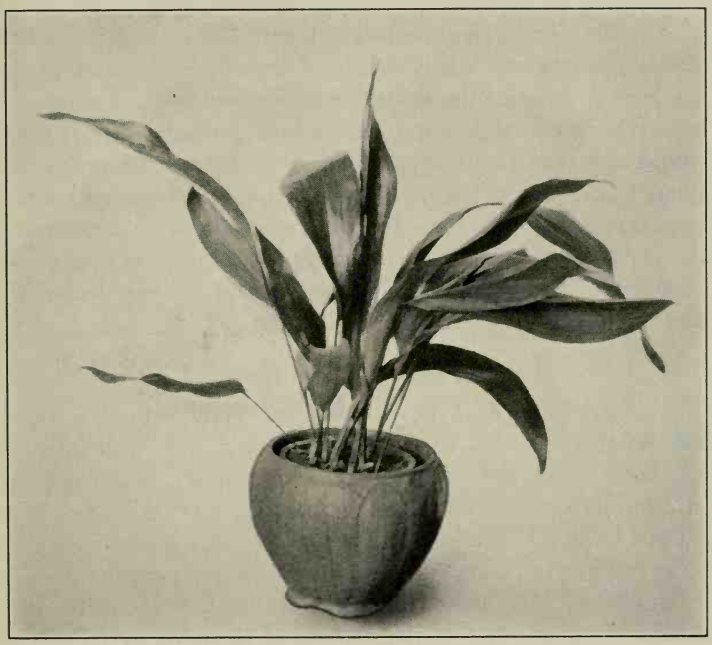
Foliage plants, being slow growers, are generally more expensive than flowering varieties, but when we consider their lasting qualities we cease to think about their cost. These plants when given even ordinary care, will last for years and, unlike most flowering plants, their beauty will increase as the seasons roll along.

Read Cultural Notes

There are long lists of foliage plants in every catalog which, if they are accompanied with illustrations, are very enticing. But before choosing a plant from one of these lists it is wise to read the cultural notes and learn whether it is a plant that can stand adversity or whether it will refuse to live outside of a greenhouse. Should you purchase a plant merely for its delicate beauty it will begin to droop at the end of the first week and its life will be a tragedy.

Aspisdistra Always Reliable

There are, however, a number of really attractive varieties, while not unusually or especially new, are dependable, and when it comes to house plants it is dependability that counts. The first of this list and, I believe the most dependable of all foliage plants, is the Aspidistra, commonly known as the Ironplant. It is one plant that is seemingly oblivious to its surroundings. Give it all the water it wants and it will be



ASPIDISTRA

Not only the very best of house plants, but an attractive one, too. Whether it is in the bright sun of a bay window or at the foot of the front stairway with never a ray of light, seems to make but little difference. —*Fritz Bahr*

grateful and get along without any further attention. It will flourish in sunshine or shade and a dusty atmosphere does not trouble it in the least. It should, however, have its foliage sprayed once a week. This treatment will not only keep the pores open but will greatly enhance its beauty. The Aspidistra does best in a loamy soil. There are two varieties—the dark green and the dark green with the white stripes—either variety has a splendid constitution. It is well, about once a year, to divide the roots of this plant. This will benefit the parent plant and double your stock.

Dependable Dracaena

The Dracaena, commonly known as Cornplant, is an interesting and worth while foliage plant which of recent years has been forging to the front. While it is a reliable plant, it has rather definite requirements which must be met if you would keep it in a state of perfect health. One of these requirements is a daily sun bath. It is also a heavy drinker and must have water in abundance. It also demands fresh air and a rich soil. Always keep Dracaenas in a place where its foliage is least apt to become broken, for the loss of a single leaf will mar the beauty of a plant forever.

The Popular Pandanus

The Pandanus is a popular foliage plant whose foliage somewhat resembles that of a Pineapple. A well-formed specimen is always decorative. This variety, however, is only suitable for a room whose temperature stays around 70 degrees. It also refuses to do well in any but a sunny room. Most failures in successfully raising a Pandanus can be traced to watering. Its long ribbonlike leaves must be kept immaculately clean, but in the process of sponging or spraying should water be allowed to remain in the crown of the plant decay will set in and usually the plant at once begins to fade.

Palms Always Decorative

Palms are always desirable, but they are a bit harder to handle than the other varieties. The Kentia is the most reliable variety for house culture. It has a good constitution, but it requires a rather even temperature if it is to remain in a state of health. Palms are apt to be attacked by scale unless their foliage is sprayed almost every day. They also must have fresh air each day. Many people think that their Palms must be transplanted once a year. This is a mistake. The only time to transplant a palm is when you notice the roots beginning to push their way up from the soil. This is a sure signal that the plant requires more root room. Always when re-

potting a palm use fresh soil—one composed of good garden loam, sand and manure, equal parts, will suit it best.

The Birdsnest fern is a splendid plant for a light window. The broad foliage of this plant is most attractive. It is one plant that usually grows without coaxing.

The Rubber (Ficus elastica) is an "old friend, tried and true;" it grows under almost any conditions and when a plant becomes too large or too old, you can by removing cuttings, in about two months, possess several young plants instead of one.

Slipping A Rubber Plant

Slipping a rubber plant is a simple operation. All that is necessary is to select a terminal branch with about five young leaves; then with a sharp knife make a diagonal incision through the stem ¾ inch in length. Place a broken piece of match stick in the incision to keep the sides of the wound from adhering. Next bind about the incision with soft string some dried moss (this can be bought from any florist for a few cents). The bandage when completed should be the size of an apple. Keep the moss damp and watch it. In the course of six weeks, the time depending largely on the constitution of the plant, you will notice white threadlike roots appearing on the outside of the moss. This will mean that the time has come to unbind the moss and remove what will then be a well-rooted young rubber plant. Pot it in the same soil as suggested using for a Palm, and the young plant will soon begin showing signs of growth. Keep the plant in a rather cool and not too sunny place for the first three days after planting.

Repotting a Rubber Plant

About February the leaves of the rubber are apt to turn brown and begin to drop off. This is a natural happening and a sure indication that the plant is discarding the old and is about to enter a period of new growth. So to encourage it to send forth new shoots, it is wise to repot it at this time and afterward to keep it in a warm place.

Colorful Crotons

Of all the plants that are grown for their foliage, there are none that excel the beauty and richness of coloring that is found in the Crotons. There are no two alike. On the same plant you will find leaves that have touches of brown, green, and yellow, and you will find others of deep orange, dull green and, perhaps, long streaks of scarlet. The texture of the leaves is good, being almost as firm and much more glossy than those of the rubber plant.

The leaves of the Croton are borne in great profusion and their compact arrangement prevents the unsightly, straggling appearance which detracts from so many foliage plants. A small Croton may lose five or six leaves and never show the loss. The Croton comes to us from the tropics, therefore we must give it a great deal of heat, sun and water.

Frequently when you first bring them from the garden into the house the Crotons begin to shed a leaf or two. When they do this, it is a sure indication that they are not receiving a sufficient amount of heat or humidity. Many fail with Crotons in the house because they do not give them sufficient heat at night. The plant resents this, so, if you would be successful with them place them during the night quite close to a warm radiator. When watering Crotons, which you must do every day, give them a sufficient quantity to wet every particle of soil; then, in addition, sprinkle the foliage very thoroughly.

All of the above-mentioned varieties are reliable in every way and unless you have had some experience with plants or have a well-equipped greenhouse or conservatory it is well to confine your efforts to plants whose needs are few and easily supplied.

Chapter X

FLOWERING PLANTS

FLOWERING plants are rather more difficult to manage in the house than foliage plants. They need sun at least five hours a day and even then will not do well indoors. The usual dropping of temperature at night in a dwelling is a sore trial to plants that are in bloom — they need a constant uniform heat.

Of course, there are many plants that with a certain amount of coaxing can be induced to do well, but the list of those which do not require coaxing is rather limited in number.

Four Reliable Varieties

Four flowering plants, reliable in every way for house, culture are the Primula obconica (Primrose), Geraniums, Cyclamen and Amaryllis. There are many kinds of Primroses adapted to living room cultivation, but the obconica is the best, for it is rarely troubled with insects; it is a profuse bloomer and will flower from October until June provided the dead blossoms are picked off. This prevents the plant from developing seed. The Primrose must have both water and sun in abundance; it also requires a good deal of heat and fresh air. Raise the windows twice each day for 15 minutes in rooms where you have this plant.

Never Stimulate Geraniums

We all appreciate the cheerful friendliness of the Geranium. Once, and not so long ago, it was considered quite too plebeian, but not so the modern Geranium, for it is really a gorgeous flower. Its coloring is clear and pronounced, the individual

flowers large, and the trusses erect. This improvement has not come about through any lessening of the amount or quality of the foliage. The Geranium's requirements are few. It does best in a soil composed of good garden loam, sand and manure in equal parts. Do not stimulate the plants with liquid manure or patent fertilizers, for that will cause an abundance of soft foliage, not self-supporting, and absolutely no flowers. Give it water at least three times a week and keep it growing at all times in small pots. Geraniums that are "overpotted" are not apt to develop foliage or flower. While it insists on sunlight it is not particular as to heat.

Geraniums are easily propagated from cuttings. Select good, firm, young growth for this purpose. Make the cutting three or four inches long. You must be largely governed in the length of the cutting by the condition of the wood.

If you make the cutting so long that the bottom of the slip is very tough and hard, it will be a very long time in rooting; but if cut nearer the end of the shoot, where the wood is softer, the cutting will root in about ten days or two weeks, according to the temperature of the place in which the cutting is growing.

In making a Geranium cutting, smooth the heel of the shoot with a sharp knife, then trim off about two-thirds of the foliage. Also carefully remove all the little wings which you find at the base of Geranium leaves.

After making the cuttings, prepare some nice sandy soil in which to plant them. The cuttings can be rooted either in separate pots or in larger pots, putting several cuttings in each. If placed in larger pots, be sure that these are half full of broken crockery or charcoal for drainage. Use a little stick for making the holes for planting the cuttings. Have the soil pretty soft. After planting give a good watering to settle the earth around them. They can stand in any ordinary window, but you must be careful to shade them from the sun each day until they are firmly rooted. Also be careful not to overwater them. If one of them begins to

show the slightest sings of decay, pull it out at once, or the decay will spread to the rest and you will lose them all.

When you are sure that the cuttings are rooted, lift them carefully and pot them in separate pots. If you make these cuttings in the fall from plants that have been growing in the open, they will bloom in these same pots during the following winter without needing a transfer into larger sizes.

Geraniums must have their growth retarded in all cases for Winter flowering. When they are starved and potbound, the strength of the plant all goes into blooms. Repot them and they will stop flowering at once and devote their energy to developing growth. If you keep shifting the plants into larger pots, you will soon have a window full of growth, very soft and luxuriant, apparently, but no flowers except possibly weak trusses on the end of the stalks a foot long. This result of course is not attractive.

Another trouble with soft, growthy specimens (besides failure to bloom) is that Geranium plants in this condition are likely to be covered with insects, especially green flies. These little pests, once they gain a foothold, will soon attack every plant that you have. Geraniums require very much less care than the majority. Give them plenty of ventilation and a sunny window and these truly homey little plants will be sure to respond to such treatment and favor you with blossoms the entire winter.

A window box of pink or red Geraniums and English Ivy adds much to the charm of a living room, and requires so little care it is a pity we do not see more of them.

The Cyclamen or "Mock-orchid" has such attractive foliage that were it not flower-bearing it would still be worth while. Its dark, glossy leaves with their wonderful tracery of pale green veins are very beautiful. The flowers have a decided individuality, in formation, texture of petals and rare color tones (white through pink to carmine-rose) that rivals that of the Orchid. Being almost an aquatic, it requires much

water—but never permit water to touch the foliage. If even one drop of water collects on or about the crown of the plant rot will follow. There is no cure for this malady and it is contagious.

If the soil in which you have your Cyclamen growing is permitted to become dry for half a day, the growth of the plant will be materially checked and it will take six months to recover from the effects. Next in importance to water is the matter of shade. Growing, as it does, in its natural state in low marshy places, the Cyclamen is used to a great deal of shade. Remember, therefore, that while it demands light it abhors several hours of direct sun.

The Cyclamen does best in a soil composed of good loam, peat and sand, with a little brick clay. A few pieces of charcoal added to the soil are helpful although not essential. Plants receiving much water are always benefited by the presence of charcoal, as it prevents the souring of the soil.

Give the Cyclamen plenty of fresh air. Ventilate the room in which it is growing for periods of ten minutes each, at least three times a day. It is not particular as to heat; any heat above freezing seems to suit; and it will survive with three hours of sun a day.

The Cyclamen has two phases of life. The first is a period of development and the second a period of rest. Each must be complete. After your plant ceases to produce more flowers, gradually cease to water it. About the first of May set the pot in which it has been growing in a dry, dark place and forget it. Then, about September 1, bring the pot to the light, remove the dead leaves, clean the outside of the pot and set in a light place. From then on begin watering it regularly, being careful never to permit water to lie on the leaves or about the crown of the plant. If you do, it will start the "rot," a disease without a cure. Always, to avoid this tragedy, pour the water over the soil.

The Amaryllis is essentially the flower of the amateur. In motoring through the country far from main traveled roads

and far away from modern florists' establishments one usually sees the Amaryllis in all its glory. You cannot help but admire its gorgeous trusses of huge scarlet flowers—and, oh joy! it is so easily raised—like Topsy, it "just grows." All that is necessary is to keep in mind that it is a plant that must have alternate periods of growth and rest. When growth is going on you must encourage the plant to a free and full development; when growth is completed, treat the plant in such a manner that the rest will be as complete as was its growth.

Most people who fail with the Amaryllis do so because they attempt to keep it growing all the time, in a sort of indifferent, utterly unsatisfactory manner—because water is applied regularly.

As long as foliage is produced, give your plant water, but when growth ceases, cut off this supply and give just enough to prevent the soil from getting dry. Keep up this treatment until the plant shows signs of renewal of growth. Generally, the first indication of this will be the sending up of a flower stalk, after which leaves will be produced. This should be a signal to apply fertilizer regularly. If well fed and watered, the plant will store up in the bulb the strength and energy which will be manifested in flowers later on.

The Amaryllis likes a rich soil. One of loam into which at least a third of its bulk of old cow manure is mixed, will grow it to perfection. Set the bulb half of its depth in the soil. Allow two or three bulbs to form around the old bulb. After that, remove the offsets promptly.

The Amaryllis does not like to be disturbed; therefore rarely disturb its roots.

Never place the bulb in a damp, cool place. Keep it in a light, dry, warm place at all times.

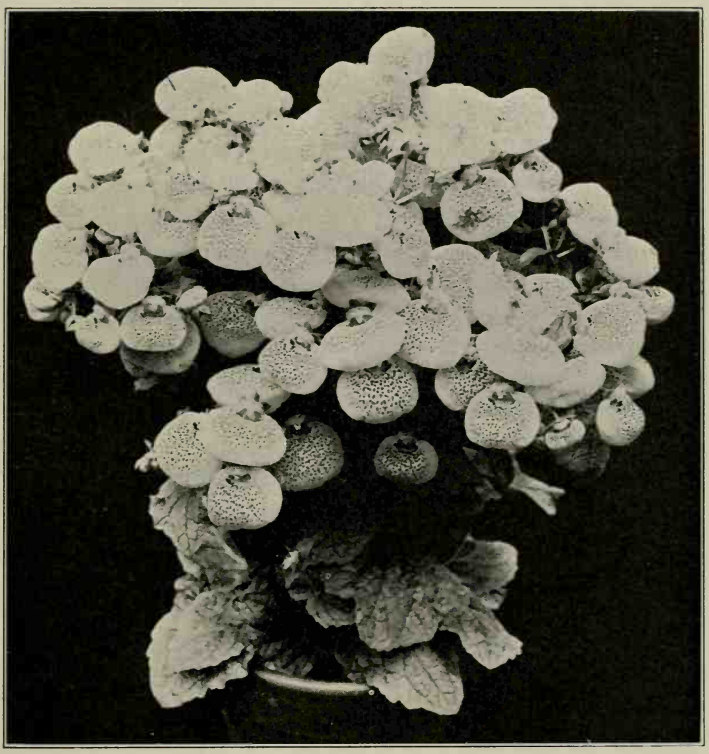
Chapter XI

MORE ABOUT FLOWERING PLANTS

THE sturdy Slipper-flower (Calceolaria), is another plant well suited for house culture. This quaint-looking plant, with its load of bloom, strangely like numberless tiny pincushions, will flourish under the same conditions as the Geranium.

Calceolaria

The Calceolaria has, however, one deadly enemy—the green fly, which, if it makes an attack and is not at once eradicated, will, in a few days, kill the plant. The moment you see the first fly, or even if you are only suspicious of its presence, is the time for you to begin to rout the enemy. If you have been showering your plant regularly, this can be easily done, but when you have neglected this for even a few days you may be surprised if you examine the young, tender branches to see these completely covered with aphis (green fly). When this occurs, get out your sprinkler at once. This insect does not take kindly to the daily shower. The best insecticide to use in fighting aphis on any house plant is tobacco. While the plant is damp you can sprinkle it over the foliage (using it in powdered form), or you can make a tea of it. An ordinary package of smoking tobacco (the cheapest kind will do), steeped in a quart of water will make an excellent insecticide for use in a sprayer. You can hold the plant upside down and literally dip its foliage in the solution.



CALCEOLARIA

Would that the world no sharper barbs possessed
Than in thy fair bosom bides.

BEGONIAS

The last few years the Begonia has been growing in popularity, until now it is one of the most sought after plants we have. It is not only beautiful but it is reliable which, as I have said before, is all important. This truly homey plant will flourish in any room where a Geranium will grow. It has few wants and practically no insect enemies, except the mealy bug, which occasionally attacks it; a prompt application of an infusion of Fir tree oil soap will rout these pests. The

Begonia, however, is particular about soil, liking best a mixture of good garden loam and leafmold, with just enough sand to perfect the drainage. If you cannot get leafmold, use the substitute which has been described in the chapter on soils.

In growing Begonias you must always watch the drainage, for they resent "wet feet." Their rootlets, if kept in wet soil, will start to decay.

Begonias do best in a southern or eastern window. In a very light but sunless window they bloom well but their flowers lack the rich color which they have when given the sunshine of the early part of the day, or that of midday, tempered with partial shade as furnished by vines outside or shaded by other plants between the Begonia and the glass.

In watering a Begonia, pour the water over the soil rather than over the top of the plant. If you sprinkle the top of the plant some water is likely to collect in the crown or heart of the plant. Should this happen, and it be permitted to remain, the "rot" will develop.

There is no method of combating this malady. Once it starts the best thing to do is to discard your plant at once, as the "rot" is contagious and may attack other plants. The name of this disease, while not attractive, is a descriptive one. A plant with "rot" starts to slough off along its main stem, in much the same manner as necrosis progresses.

Coral Begonia

The showiest Begonia for house culture is B. coccinea, usually listed in the catalogs as B. rubra or B. maculata var. corallina. The stems of this variety are bright green, stiff and erect. The leaves are from 3 to 5 inches long and about 4 inches wide with the most enchanting dull red margins. The deep coral colored flowers are borne in large clusters. The plant, if kept in a sunny place, will produce flowers during three, and sometimes four, of the winter months.

Begonia metallica

A second variety of Begonia that should be in every window garden is the B. metallica. This is the variety with the beautiful variegated foliage. The plant is attractive at all stages of its career. Its large notched, bronze leaves are very decorative and the dark red veins tend to heighten the effect. The flowers, though medium sized, are quite numerous and bluish-white in color.

Gloire de Lorraine

The Begonia Gloire de Lorraine that the florists propagate, especially for Christmas trade, may prove a bit too difficult for the amateur to grow in the house. This variety has a particularly long blooming period, beginning to unfold its petals in October and keeping up the good work until April. When you see that this plant is showing signs of ceasing to bloom, prepare to give it a rest. While resting it will demand less water than when it is growing, but it must never be permitted to become dry. Usually in late May it is safe to begin increasing the water. You cannot expect the plant to make much growth before fall. During the summer keep the plant in a shaded position. In the fall change it to a more sunny place.

Propagation

All varieties of Begonias having hairy stems may be propagated from cuttings. The varieties having rhizomes may be cut into pieces about an inch and a half long and planted in much the same manner as one would plant large seeds. Never attempt to transplant any Begonia during the winter. The best time to do this work is in the spring or summer.

Petunias

Petunias are almost always satisfactory for growing *en masse*. A single pot of Petunias is not very impressive, but a window box, or a large basket filled with a number of these old-fashioned flowers, with each slender branch laden with a riotous profusion of blossoms, is charming. There are many

varieties of Petunias. Double white, of which "Lady of the Lake" is the best, is a free bloomer—and we all know the artistic value of white blossoms neighboring brilliant color masses. The comparatively new Royal Purple is always lovely when placed as a near neighbor to some white variety. Any of the purple varieties have rather sprouty, awkward habits of growth and require careful pruning and training.

Heliotrope

The last few years much has been done with the Heliotrope, not to increase the beauty of its flowers but rather to make improvements along the line of training. Now this plant is trained to adhere to standards. For instance, wire uprights are designed like small umbrellas; the plant is then tied close to the wire stem or handle; when it reaches the top where the wire ribs begin to spread, a branch is carefully tied to each rib when it soon can be induced to form a graceful shower of pendant sprays, each spray tipped with a mass of fragrant, lavender blossoms.

The Heliotrope blooms profusely in winter if it is not allowed to bloom during the summer. It does best in a soil composed chiefly of good loam, sand and manure, equal parts. It demands plenty of root room. Never permit the roots of the plant to become really dry. Remember that it has very fine roots which make it possible for the plant to absorb large quantities of water each day. If you allow it to become dry or pot bound, you will soon notice the leaves beginning to turn brown, after which they will begin to fall. The Heliotrope delights in plenty of heat and sunshine. It is very easily grown from cuttings.

Genistas

Genistas are among our loveliest of house plants. How we enjoy these golden yellow fragrant blossoms in February and March. Never prune a Genista, for in so doing you lose much of its beauty, as its graceful irregularity is very charming

and much more attractive than the round heads which the florists offer. Always give this plant a great deal of water when in flower, and always remove all faded flowers as soon as they begin to show signs of drooping.

Nasturtiums

Should you be a lover of Nasturtiums, especially the climbing varieties, you may welcome the idea of having them in an indoor window box, in which case I would suggest starting them from cuttings. This is an easier and quicker way to raise them than to start seeds.

Cinerarias

Cinerarias make effective house plants and are very cheerful for an invalid's room where plants with fragrance are often tabooed. The Cineraria is grown from seed and is a plant of one season. When it has finished flowering its usefulness is over. You will experience little trouble growing this plant from seed. It has no particular requirements and is not apt to be attacked by insects.

Abutilon

The Abutilon, commonly known as the flowering Maple, because of the resemblance of its leaves to that of the Maple, is one of the very best plants we have for window culture. Like the Heliotrope it is one of the plants well suited for the amateur to raise. It has one great asset, it will bloom almost the entire year.

Its flowers are pendulous and bell-shaped. Hence it is sometimes spoken of as the Chinese Bellflower. Its foliage is always bright, being a trifle lighter green than the leaves of most foliage plants.

You can propagate the Abutilon from cuttings, but you must start them in sand when they will be almost sure to develop roots. One large grower assures us that he never loses one cutting in fifty if rooted this way.

Spiraea

The Spiraea is a very inexpensive and altogether satisfactory house plant. It does well in the living room in winter and thrives equally well in the open border a few months later.

In its native habitat it is found growing in low, marshy places; therefore when we attempt to flower it in the house we must give it a great deal of water. In fact if we permit the Spiraea to become dry for even a few hours it resents this neglect and shows it by literally lying down instead of standing erect with each head of bloom held proudly up to the sun. To grow the Spiraea to perfection you must give it plenty of root room and a great deal of heat and sun.

Jerusalem Cherry

The Jerusalem Cherry in some respects is a worth while house plant and in some other respects it isn't. The usual experience is to get it to grow very beautifully for a while and even set fruit; then just when you are congratulating yourself, the lovely scarlet cherries begin to drop off, not one at a time but dozens at a time. This is usually caused by too much heat. It is best when the tree is in fruit to keep it in a sunny but cool room.

Quite large plants, well filled with red berries, may easily be raised for Christmas from seeds sown in early spring. Plunge the pots in summer in some partially shaded place in your garden and give the plant plenty of water at all times.

Chapter XII

THE CALLA—FUCHSIA—POINSETTIA

THE Calla is such a familiar flower that we are apt to forget its lineage. In fact, some of its most enthusiastic admirers may not know that this stately flower bloomed along the Nile in the days when Cleopatra's gilded barge, rowed by Ethiopian slaves, was wont to glide among those legend waters.

Many persons in our prosaic day, who attempt to grow the Calla with its wealth of tropical foliage and its great trumpet-shaped flowers (as the spath surrounding the spadix on which the flowers are borne is called) fail to succeed with it or are, perhaps, only successful to a degree. They may have plants with any number of large green leaves but that is all. They are apt to tell you "My Calla seems healthy, but it simply will not bloom."

Now as an answer to this statement and by way of encouragement let me explain. Your Calla will not bloom until it has attained the age of two years! This is true of all Callas whether they grow in Egypt, in greenhouses or in your living room. So, after all it may only be a case of watchful waiting on your part.

But should your Calla be more than two years old and still have no flowers you must consider the kind of soil you are using.

Soil

The Calla has very definite requirements regarding soil. It must have a soil as nearly as possible resembling the alluvial

deposits that are left along the Nile where, twice a year, it overflows its banks. It is in this rich soil that the native Egyptian flower thrives, so we must make a soil whose constituents resemble this native soil, if we would be successful with Callas.

A soil composed of leafmold, sand for drainage and some mucky material found about the edges of swamps or ponds, suits the Calla best. If you live far from ponds or marshes, ask your florist to give you some soil suitable for this variety. He will be sure to have some that meets the Calla's requirements.

Drainage

Always see that your plant has perfect drainage, for while the Calla is aquatic in its nature, it resents stagnant water at its roots. Keep it moist by frequent applications of water rather than by permitting it to stand in water. Stagnant water is sure to start root decay. With perfect drainage you have no acidity in the soil.

Summer Care

In June put your Callas outdoors, leaving them in the pots. Turn the pots on their sides and leave them until September; under a tree is a good place for them. Give them no attention. Let the old leaves fall off. When the time comes to report, break away the dry soil from the tuber which you will find plump and sound; place this in the soil I have recommended and water it moderately until young leaves appear. After that water it freely.

Fuchsia

Someone has spoken of the Fuchsia as "A fairy tree with lighted lanterns, which flourishes in sun or shade." A charming description of this unusually dainty plant.

The Fuchsia makes a most desirable window plant if you will bear in mind that to bloom well, it must be kept growing. It will produce flowers only on young growth. If you allow

it to become potbound or stunted for any reason, the wood hardens and you will have no more flowers until you can induce new growth, when once more the flowers will appear.

When in a stunted condition the Fuchsia is apt to be attacked by mealy bug which soon cover the plant and, many times, destroy it.

Single Varieties for Winter Blooming

Young plants grown in good, rich soil and kept in a warm place, will be sure to flower in the winter. For winter-blooming I prefer the single-flowered varieties. The double ones seldom bloom profusely until spring comes. The "Dwarf Gem" is reliable for winter-flowering. It does not grow over six inches high, but is almost a solid mass of flowers the entire time. These are quite large, having red sepals and a purple corolla.

Ventilation

Fuchsias require plenty of ventilation. The room in which they are growing should be thoroughly aired once a day. Always change the position of your plant each day, turning it around a little. This will have a tendency to keep it shapely.

Poinsettia

The Poinsettia, or Christmas Rose as it is frequently called, comes to us from Mexico or California, where it is seen in great profusion at every turn.

The Poinsettia pulcherrima requires a sandy soil, about one-half sand and one-half good garden loam, and being a native of Mexico, must have plenty of sunshine and heat. Just before it unfolds its scarlet leaves you must give it some stimulation in the form of liquid manure. This will be sure to increase the size of the bloom.

When It Has Finished Blooming

When the red leaves begin to drop off in February cease watering it and gradually let it dry. When thoroughly dry you should place it on its side in a warm closet until May. I

mention closet because it is important that you select a dark, dry place. The plant will apparently be lifeless but when the warm spring weather comes and you begin watering it you will be surprised how quickly it will show signs of life. When the plant has developed 6 inches of growth, cut it back to the root. Shake off about two-thirds of the old soil. Then repot in same pot, replacing the old with fresh soil, composed of fresh loam, sand and manure (equal parts). Cutting the plant back in this manner increases the number of shoots and each shoot, you know, means a flower.

During the summer always keep your plant in the sun and you will experience little difficulty with it.

Chapter XIII

SUMMERING YOUR HOUSE PLANTS

MANY persons who can raise the most beautiful plants during the winter months haven't the slightest idea what to do with them during the summer months.

They usually do one of two things: "Plunge them," which means that they sink the pot with the plant in it up to its rim in the ground, or they turn them out of their pots and plant them in the open border and after that—well they think that until September 15th the plants can take care of themselves—which is a mistake.

Special Attention in Summer

If you expect to enjoy your plants and have other than indifferent specimens in the fall and winter, you must give them attention during June, July and August. Of course a plant in the open if left alone will develop growth, and usually fine growth; but when fall comes and it becomes necessary to lift it, think what happens. While the plant in the radiant summer sunshine has been sending forth most glorious top growth, it has also been developing long slender roots which have followed their own inclinations and wandered far into the mellow soil. When you lift the plant to pot it a large share of these roots will have to be cut off in order to make the root fit the pot; and when the young working roots are thus removed it will be necessary to sacrifice a proportionate amount of the top. All of which seriously checks the future development of the plant. In fact, it takes months for it to recover

from the shock. This shock takes place at a time when the plant needs every ounce of energy at its command; for the period of removal to the house is always a trying one to any plant. Because of the change in its environment, in the open border it had fresh air twenty-four hours a day and in the house it may have it only one.

A plant that is summered in the open ground soon shows the result of its lowered vitality when it is carried into the house. In fact, it usually looks worse than it did in late May after it had done a successful winter's work of sending forth new leaves and flowers, should it be a flowering variety.

Plunged Plants Suffer from Lack of Moisture

Plunged plants almost always suffer from lack of moisture at their roots. The soil about the pots seems moist and you are apt to be misled and get the impression that the soil within them is in the same condition. Close examination will usually prove that this is not the case. Plunged plants almost always suffer from droughts, for the pot is sure to prevent the soil from absorbing moisture from the surrounding soil. Such plants never grow with the vigor and luxuriance of plants in the open ground. Of course, you can water them every day, as you did when they were indoors, but if you mean to give them that much attention it will be better to keep them in the veranda when they can be protected from the extreme rays of the sun and from strong winds or dashing rains.

Plants summered in this way rarely require much repotting when fall comes. Frequently you can remove a portion of the soil and replace it with fresh soil which will act as a tonic to the plant and enable it to stand the trying change of being brought into the house.

Plants Require Rest

Plants intended for winter flowering should, as far as possible, be induced to rest during the warm months. Never give any stimulation to a plant that does not show signs of growth.

You see, while the plant is resting it must never be overfed—in the early fall will be quite time enough to apply a fertilizer.

Try to clean your plants before bringing them into the house. Wash the outside of the pots, cut away any dead wood or leaves, and be sure to see that each specimen is free from insects.

Every rule has its exception, and while plants as a class should not be "plunged" in summer, the Azalea is one plant that does require such treatment.

Summer Care of the Azaleas

People usually keep their Azaleas standing in a shady place and often directly under a tree. They reason this way: "An Azalea is a native of the woods; it belongs to the wild Honeysuckle family and we find it growing under trees and along the edge of the woods; therefore we must stand it in the shade."

This treatment will have a sure tendency to weaken your Azaleas, with the result that the plant will not set any, or at least, very few buds. As a consequence, you will be disappointed when the blooming time comes.

The Azalea forms its buds for the next season's bloom during the summer and is entirely ready for blooming when the fall comes. So it is necessary, if you want to be successful, to repot the plant immediately after it is through flowering—that is, if it is potbound and needs it. Put it in a size larger pot and plunge the pot in the flower bed in full sun and allow nothing to shade it or interfere with its having plenty of air. Here you must keep the Azalea watered during the summer season.

At the Approach of Frost

At the approach of frost it must be lifted, pot and all, from the flower bed and brought into the house to some cool, light place. Any place where it stays above freezing will do. From this time on water it carefully. Do not water it every day as this will induce it to start to grow, and if it does this

it will be sure to lose some of its flower buds, many of those remaining on the plant will fail to develop properly, and those that do open will be down among the foliage where they will look badly.

Fall and Winter Care

Keep your plants fairly dry during the fall and winter months, as this is the Azalea's natural season of rest. Since they do not get this rest outside, as do many of the native varieties, they must get it inside.

In dry rooms they should be watered about three times a week. About the middle of February bring the plant into a warm, sunny room and water it every day.

Begonias

Begonias require to be given special attention in summer if you are expecting them to beautify your living rooms in winter. During the hot weather they should be given a light, sandy soil and should be shaded in such a manner that they get all the sun possible but are not scalded or burned.

Chapter XIV

LAWN MAKING

TO have really good results the preparatory work of lawn making should be done as early in the spring as possible. The proper time to commence is just as soon as the earth is dry enough to work satisfactorily. And let me explain that by a lawn I mean any grass plot, even the tiny one we see in front of most city homes, which in some cases is only 3 feet by 10 feet.

The First Step in Lawn Making

The first step in lawn making is to have the ground thoroughly manured with good, well-rotted stable manure spread evenly over the surface. Next give the earth a thorough digging or plowing, according to its size. The average city plot can be spaded.

After the ground is well broken up it should be harrowed over with a straight-toothed harrow (or, in the case of the small plot, a garden rake) until it is perfectly pulverized, after which it should be rolled. If the lawn is of good size, after the rolling it should then be harrowed again backward and forward several times each way with a spring-toothed harrow. By this time it will be very soft and ready to seed.

Sodding the Edges

Be certain that all parts of the lawn are evenly covered with good soil, at least 6 inches or more in depth. Before seeding, the edges of the plot next to paths or flower beds should be well

sodded to the width of 1 foot. The sod should be carefully laid and firmly bedded.

Why Some Amateurs Fail

The lack of firmness with which a sod is laid accounts for many amateur's failures with their first lawns. To have good results the sod should be of even thickness. Make sure that the top of the sod is even with the general level of the ground of the lawn surface.

Frequently inexperienced gardeners lay their lawns with at least a thickness of sod above the surface. Edging laid this way will be higher than the rest of the grass and always unsightly. It should be made level with the surface at the start, the object being to give shape to the paths; or, if the grounds are large enough to have a driveway, it gives them a distinct outline. If paths or drives are not thus edged, the first good washing rain will destroy the edges, and they will look very unshapely.

When laying the sod in place it is unnecessary to devote much time to outside or inside edges. They need not be even, and to make them so takes too much time. It is better, after the sod is down and has been well tamped to go over it and cut the edges neat and true, both outside and inside, with a knife (the kind used for cutting binder twine is the best). After all edges are finished, give the lawn the last shaping up with the harrow, after which it is ready for the seed.

Sowing the Seed

First sow one way back and forth and then exactly the opposite. In this way the seeds are sure to be distributed evenly over all parts. The best seed for the lawn is the Kentucky Bluegrass (Poa pratense) mixed with about three-fourths white Clover by weight. To distribute the seed evenly, sow when there is no wind blowing. After the seed is sown go over it with a hand rake. Do the work carefully, so as to insure the even distribution of the seed.

After sowing the seed and raking it carefully, the ground is ready for the final rolling which should be done with a heavy roller. If your roller is too light pile on all the heavy stones it will hold. Roll it first one way, then slowly backward and forward, going in just the opposite direction, then three times diagonally across and then the opposite again.

One Way to Avoid Hills and Hollows

Landscape architects think everyone should know this much, but it is quite common to see inexperienced persons roll one part of a grass plot backward and forward several times in the same direction, and then go over the rest in the same way. By so doing the surface is full of hills and hollows which it is impossible to avoid.

Every time you roll north and south you must roll east and west also. In this way the ground is brought down very solid and equal, with the surface just like a board. After it is smooth and even, roll it still more to make it very hard—which it must be if you would have green sod as early as possible.

Mowing

Mow the grass just as soon as it is sufficiently high to reach between the knives of the mower, and from then on mow the whole plot just as carefully as if the lawn was well established.

At the first mowing you will probably cut only soft weeds and little, if any, grass. In a few days mow again. This treatment will keep the weeds under control, and in a short time will result in a fairly close greensward. If the weather is favorable, in about ten weeks from the time the seed is sown you will have a rather good sod. Do not let an abundance of soft weeds distress you. Frequent mowings will soon kill them. By the early part of July you should have a fine lawn. The oftener you mow it the better and thicker it will become.

You may think I have advocated too much rolling, supposing that in such hard earth the little seeds would be unable

to germinate. This is a false idea. Hard earth does not interfere with germination—and how could one possibly run a mower over a soft lawn? Should you wait to use the mower until the soil is settled the grass would be too high and you would have to use a scythe.

Do Not Rake Up Short Ends

If you mow frequently do not rake up the short ends of grass. These are beneficial to the young roots, in that they act as a mulch and aid in retaining moisture during prolonged dry spells, which are sure to come in midsummer. Of course, where the grass, through neglect, has become very long, it will be unsightly and must be gathered up.

Chapter XV

EARLY WORK IN THE BORDER

SPRING! Forsythias! Snowdrops! Pussywillows! These first few days in the open—oh, how we relish them! Damp early mornings, balmy middays, lengthening afternoons.

> "Every clod feels a stir of might,
> An instinct within it
> That reaches and towers,
> And groping blindly above it
> For light,
> Climbs to a soul
> In grass and flowers."

On all sides we see so much that needs our attention.

First of all, there is the border to be put in order. Rake away the trash. Remove the loose stones and bits of bones. The next step, in order of its importance, is to cut away all dead wood. This does not include any real pruning as that should be done later. Should you prune at this time, you will be sure to cut away blooming wood which will mean a dearth of flowers this season.

Nearly all plants in borders, especially herbaceous borders, are gross feeders: Do not imagine that they will do well in any good garden loam. They may flourish at first but they will not keep growing vigorously indefinitely. Sooner or later they will have exhausted the soil.

Incorporate Well-rotted Manure with the Soil

So at this time it is wise to spread a layer of well-rotted stable manure over the ground. Allow it to remain as a top-

dressing for a week; then go over the entire bed with a digging fork and carefully incorporate the manure with the earth. I emphasize the necessity of care, for reckless digging with a garden fork is apt to injure the roots of the plants. Should you have top-dressed the soil in the fall, then it will be quite unnecessary to do it in the spring, but you will have to, of course, turn it under.

If you do not add some manure to the soil of your border at least once a year, you will find that during long summer droughts your plants may become spindling and droopy. There are two times each year when it is well to add new fertilizer to your borders. The first time is in the spring when the plants are just emerging from their winter resting periods and the second is in October when the soil is yet warm and there is still time for the plants to receive some nourishment before the ground freezes.

Never Plant When Garden Is Wet

Great care must be taken not to plant when the garden is in an excessively wet condition, after frequent heavy rains, as working the soil in an effort to plant when the ground is in a literal state of puddles only tends to batter the border down, with the result that, when dry, it becomes caked and sometimes does not resume its open condition again during the entire season.

I do not advise weeding at this time because, even where every plant has been carefully marked in the fall, some of the markers may have gotten lost and as a result there is always some uncertainty as to what is what. So every bit of green that pokes its head up through the brown ground should be given a welcome.

Never Begin Weeding too Early

If you begin uprooting while the plants are only an inch or so in height, you will of course lift weeds but you will be liable to lift flowering plants as well. So in all cases put off

pulling weeds until the middle of May, except the plantain. August is the month to wage war on these troublesome weeds. Earlier in the season to attempt to remove them is always a back-breaking job, but in August they seem to have lost their grip in the soil and can be pulled up as easily as can an onion in the garden.

So many people blame the abundance of plantain that annually appears in their lawns on the manure they spread over their grass in the fall. They feel that this is especially true if they used the ordinary stable manure. This is a mistaken idea.

Experience has taught landscape men that well-rotted manure contains very few viable seeds. The only way to make sure about this, however, is to test the manure before you use it. This test is a very simple one, so simple that I would advise every one to make it in order to ascertain whether there is any real danger, particularly if the manure is to be used on the grass plot. If it is to be used on your herbaceous border it doesn't make so much difference. In such a case the weeds can be easily lifted as they appear.

A Test for Weeds

To test manure for weeds spread some of it over the bottom of a cigar box and keep it warm and moist. In a week or ten days weed seedlings will begin to appear on the manure's surface. If they fail to appear you can be reasonably sure that the fertilizer is safe to use in any part of the garden.

Chapter XVI

HARDY HERBACEOUS STOCK FOR PERMANENT EFFECTS

WHILE we all enthuse over the common flowering and foliage plants for bedding purposes, if we were to depend on these alone our plots and borders would be like Old Mother Hubbard's cupboard, quite bare, for a long time in the spring. For this reason, and because these plants die quite early in the fall, it is well to plant a large proportion of your garden with suitable hardy herbaceous plants.

By giving much space along borders, in special beds and through shrubbery groups, to this class of plants, your garden becomes not only beautiful at all seasons, but you have the satisfaction of knowing that it is permanent. If these hardy plants combined with suitable shrubbery are judiciously planted, less labor will be required and more satisfactory results will be obtained.

Select Varieties with Care

Hardy herbaceous plants, when carefully selected, can be planted so as to insure a continued show of bloom the entire summer. They commence to grow very early in the spring, so that the entire garden is soon a mass of young growth, and usually by the time the grass is ready for the first mowing the beds are in bloom. With the addition of a few hardy bulbs, blooms will be assured as soon as the frost is out of the ground.

Start with a Few Easily Grown Varieties

Let me suggest, therefore, that if you never have undertaken the culture of hardy herbaceous plants, that you make a start with a few easily grown varieties, and gradually increase your stock and collection from time to time. Even if your space is limited to the usual city backyard, plant one or two varieties. You will never regret it.

As a general thing this class of plants is easily grown. The most important detail in raising them is a thorough preparation of the soil. Never be content with simply digging a hole in the ground at some convenient place and planting a root. Remember that these plants will remain where you place them for years. So make a good start.

Do Not Be Sparing with Manure

First, incorporate some well-rotted manure into the ground. Do not be sparing with it, but use it freely. If it is well-rotted it will not injure anything. In preparing the ground, dig deep and break it up thoroughly, mixing the manure well with the soil. If the ground is very hard, dig it over twice—the last time just before planting, to insure its being in good condition.

Plant herbaceous stock where it will get all possible sun and away from the roots of trees, for nothing so impoverishes flower beds as tree roots. A good location is with the shrubbery, unless the shrubs happen to be unusually strong growing varieties, in which case be careful to avoid them. Roots of small shrubbery will not interfere in any way.

Consider Future Development

Never crowd too many plants into a small space. Give each specimen plenty of room for individual development. If your herbaceous plants are overcrowded, you will have clutter instead of beauty.

In selecting varieties do not confine your choice to spring bloomers. If you do, by the middle of July your flowers will be over and you will have to depend entirely for bloom upon summer bedding plants and annuals.

In places where space is limited it is necessary to avoid strong growers because, for lack of space you must use only kinds that keep within bounds and whose roots will not interfere with their neighbors.

Phlox

Every garden should have at least one or two clumps of hardy Phlox. These plants have "come up in the world." A few years ago few people noticed them, but today they will not permit us to pass them by. From July until October, and in many places later than that, they are in full bloom, carrying their great heads of many-colored flowers on stems from 1½ to 3 feet high.

Phlox require a little attention about every second or third year when they should be lifted and replanted afresh in well-sanded and manured soil; or if preferred, beds that have not been disturbed should have a dressing of well-decayed manure forked lightly into the soil. Always thin out the shoots of young plants when they are 4 or 5 inches high. When the plants are nearly grown, stake them to prevent them from being broken by high winds. And, above all else, give them plenty of water during dry weather. They are seemingly always thirsty.

Should Fungus or Mildew Attack Phlox

During damp spells, especially in August, your Phlox may become attacked by a fungus or mildew. To check this, sprinkle flour of sulphur over the plants. This will always check the disease. If you have only room for two varieties choose white and salmon-pink kinds. Even a few of these will lend a brilliant splash of color to any border.

Red Hot Poker Plant

The Red Hot Poker plant is another plant that has "come up in the world." Not so many years ago the "Tritoma uvaria grandiflora," or Red Hot Poker plant, was a much admired hardy perennial which usually bloomed in the

TRITOMA

And 'tis my faith that every flower
Enjoys the air it breathes.
—*Wordsworth*

autumn. It was even in the olden days a conspicuous plant of the border attaining a height of five or more feet.

Of course, this plant still towers above its neighbors but in many other ways it is quite different from its ancestors. Now we have a type of this plant that will blossom most profusely from July until November.

The T. pfitzeri is one of the best varieties for general culture—no wonder we like it so. Its spikes of rich burnt orange seem like darting flames in the summer sunshine. Artists have been quick to appreciate its beauty. Many of the still life pictures in the recent exhibitions have Red Hot Poker spikes in their compositions.

Requires a Moderately Heavy Loam

This unique plant requires a moderately heavy loam in which to grow if you would have each blossom perfect tip to tip. If grown in poor soil the flowers are always imperfect in much the same way that a poorly seeded ear of corn is imperfect.

While the Red Hot Poker is listed in some catalogs as hardy, this applies only to the southern part of the country. In northern sections the plant must have some winter protection. Some manure hilled about its roots will offer all the protection necessary.

Spiraea Not Particular Regarding Soil

The Spiraea is another herbaceous plant that should be in every border. This is one plant that cares not one whit about soil. Usually it does best in a soil composed of good loam, sand and manure (equal parts). While not particular about soil it must, however, have water every day. You really cannot overwater it. Be sure when purchasing Spiraea to select varieties that will not only bloom in June and July but choose kinds that will flower through August as well.

Japanese Windflowers

Where space is limited, I always advocate planting a few Japanese Windflowers (Anemone japonica). This is a hardy garden perennial that revels in the strongest sunshine. Its colors range from pure white to deepest crimson. This dainty little blossom commences to flower in early August, when there is a dearth of flowers in the garden, and keeps up its good work until late September—and in many places until mid-October. You will never regret planting some Japanese Windflowers.

Chapter XVII

IRIS AND PEONIES

IRIS from every clime and, I might add, Iris of every hue! We have taken the Iris for granted so long that some who never heard of the Iris Society nor seen the new varieties, are not especially enthusiastic over the "common garden flag." But once they attend an annual show, or visit some botanical garden where the Iris has, as it were, "come into its own," they join the ever-increasing company of devotees of this plant of ancient lineage. For the Iris, you know, has not only flaunted its colors on the historic fields of the Old World but has graced the crests of royalty.

The Iris is at its best when placed about the edges of a pool, or when it outlines a tiny stream of water leading from some spring-house where, wandering in and out among the trees, the flowers form "a long, long trail of irresistible lure." Amer Pindar expresses this so beautifully:

> "Pale water, green along its marge,
> Where dipping willows have dropped their image
> And feathered ferns uncurl slim finger-tips:
> Of purple, primrose, and tawniest gold."

Alas, few of us can furnish our Iris with so fine a natural setting. But even in a wee garden, this flower will proudly lift its blossoms with majestic dignity, against the deep green background of a few shrubs, to the gleaming blue beyond.

The German Flag Iris is the variety with which we are all familiar. Though not the most beautiful of the Iris family,

it is the most reliable; in fact, it is so hardy that it is almost impossible to kill.

German Iris

In planting a German Iris, set it in a rich loam and be sure, when incorporating the manure with the soil, to place it rather deep so that the roots can reach it after they have been growing for some time. This class of Iris can be had in a wide range of

Japanese Iris

Iris, all hues, roses and jessamin
Reared high their flourish'd heads between,
And wrought mosaic.

—*Milton*

color, from the pure white of Innocenza to the deep blue of Kharput.

Some of the varieties that I believe are best for the amateur are Gypsy Queen, a soft lavender; Honorabilis, a jubilant, golden yellow shading to deeper bronze; and the Pallida Dalmatica, which is a bit more unusual, with its tall stems of very large, pale blue flowers and broad, straight foliage.

Japanese Iris

From Japan come the most beautiful and popular of all Iris, but unfortunately this class is not nearly as adaptable as the German varieties. The Japanese kinds must have moisture; while they do best when planted near a pool, they will become contented in a different environment, provided they are given plenty of water at all times. They also demand a rich, well-tilled soil. If your soil is poor and you are ambitious to grow Japanese Iris, you must remove a portion of it and replace it with a loam composed of one-half good soil and one-half well-rotted manure.

Japanese Iris Require Cultivation

Old, well-established plants of this class must be taken up and divided, and those which are not disturbed must be kept free from weeds and have the soil about their roots stirred at least twice each month. The Japanese Iris are fine for cutting, and as many of them are late bloomers they prolong the color in your garden.

In April it is well to fork up the soil about the roots of your Iris lightly, and give them a top-dressing of well-rotted manure.

Plant Spanish and English Iris in October

Both the Spanish and English Iris should be planted in October. These varieties can be scattered through the flower borders. In fact, they fit into any environment and are pleasing when planted *en masse* or as single specimens. These varieties do best in a light, porous soil. Should the soil in

your border seem heavy, I would advise rendering it more amenable by adding leafsoil from the woods or a little well-rotted manure.

Spanish Varieties Early Bloomers

The Spanish Iris blooms before the English varieties and while these flowers are smaller and less gorgeous than the other varieties, they are valuable on account of their earliness. There are many varieties of Spanish Iris that are worth while, but should you have only a small city garden with limited space, I would recommend the three I consider the best: Chrysolora, a lovely yellow; King of the Blues; and Snowball, a white variety.

Among the English varieties are the electric blue Celeste, and Daylight. The last is as bright and wideawake as its name implies.

There is a new variety of Iris that has proven worth while which should not be overlooked by Iris lovers. It is listed as "Intermediate Iris." This is a class of hybrids, derived principally by crossing the dwarf, early flowering kinds with the later flowering Germanica. This class comes into flower before the older German class. These plants have unusually healthy constitutions and possess the best points of both parents.

Among the best of this class of hybrids are Ceres, Helge and Walhalla.

Dividing Iris

When the Iris seemingly becomes cramped, the plants must be given more room, which means that they must be lifted, divided, and replanted.

To some people this seems like too much of an undertaking, so they leave them alone and then wonder why, as the seasons pass, their flowers get smaller and bloom less profusely.

It isn't really much of a task to lift a few Iris, lay them on their sides, and with the sharp, cutting edge of a spade divide the plant into three parts. Never divide the plant one day

and then permit it to remain unplanted until the following day. Such treatment will check the development of the plant too suddenly.

Choose a Cloudy Day

After resetting the parts, thoroughly wet the soil about the roots and wet their tops as well. All work of this nature, irrespective of the class of the plants you are dividing, should be done on a cloudy day. If you choose an intensely warm day for the work, it takes the plant much longer to recover from the operation.

Peonies

The wonderful improvement that the culture of Peonies has accomplished removes these flowers from the class of

Peony

To me the meanest flower that blows can give
Thoughts that do often lie too deep for tears.
—*Wordsworth*

ordinary garden varieties, and establishes them truly as the "Queen of Spring Flowers."

When we consider the simplicity of their requirements we surely should see them in every garden. They are a class of plants that I can recommend in every way to the amateur. They will be just the plants for the first garden and all the other gardens as well.

Always Adaptable

They are so adaptable they grace any location. They are well fitted for massing in beds, where their gorgeous colors, when in bloom, lend more than high lights to any border. Later, when their bloom has been spent, the dull copper green of the foliage will also add to the beauty of the plot.

Peonies are particularly valuable for planting in groups throughout the perennial or shrubbery border, where their brilliant hues will be most attractive at all seasons.

Gross Feeders

Peonies require a very rich deep soil. Being gross feeders you can hardly use too much manure on them. They revel in a sunny location, but will do well in a partially shaded place. They must, however, be given a liberal supply of water during their growing season; this they must have to aid them in developing their wonderful heads of bloom.

The newer varieties of Peonies are becoming more and more fragrant which, of course, adds materially to their charm. The older kinds had only faint, if any, fragrance.

Peonies Require Shallow Planting

One point that I wish all Peony growers would remember—in fact, I cannot emphasize this point too strongly—is to exercise care in planting the roots. They must never, under any consideration, be planted too deep. Always spread the roots as much as possible and place them so that the crowns are

covered with 2 inches of soil, never any more than that. More people fail with Peonies because of too deep planting than for any other reason.

Winter Protection

Peonies are perfectly hardy, requiring no protection whatever, even in the most severe climates. The first winter I think it is well to pile a little well-rotted manure about their roots; but the second year, after you are sure that they are established, this will be quite unnecessary.

Set out Peony roots during August, September, or early October, in a bed that has been well prepared.

The Felix Crousse is one of the very best ruby reds. Always plant some of the pink, reds and whites. You do not need to hesitate about planting such combinations in one bed as the colors never clash no matter how many varieties you may have.

Chapter XVIII

LILIES FOR EVERY GARDEN

LILIES come to us from all parts of the Northern Hemisphere, and in their native state they are usually found growing in good soil and in partial shade. This shade, which is the result of shadows caused by their near neighbors, keeps their roots moist at all times.

Now the nearer we can make our gardens to the natural environment of the Lilies, the more likely will these beautiful flowers be to thrive. I am speaking now of Lilies in general.

Shrubbery Border a Wise Choice

The best place to plant any Lily is in a shrubbery border. For here the leaf-laden branches of the taller shrubs will, during certain hours of the day, cast long shadows which will shade the soil about the Lily roots and thus prevent, to a certain degree, the usual evaporation which robs all garden plants of so much moisture.

Place Bulbs Three Inches Deep

Always plant your Lilies three inches deep, no matter which variety they may be. And to insure them from rotting in the moist ground before root development takes place, give them a dressing of clean sand all around the bulbs. The sand will also prevent pests of various kinds from getting at them and will allow excessive moisture from dashing rains to pass away.

LILIUM AURATUM

Consider the Lilies.....even Solomon in all his glory was not arrayed like one of these.
—*Jesus Christ*

Use of Sand

Most people do not know about this use of sand. So if there happens to be a dashing rain followed by a few damp days following the planting of their Lily bulbs, they are apt to lose 50 per cent of all the bulbs they plant.

Another thing that few amateurs seem to know about is the fact that if a handful of peat is finely broken up and placed under each bulb when it is planted, it will do a great deal to hasten root development.

Watering

Never permit the growth of a Lily to be checked. This is sure to be the result of a prolonged drought. Lilies *must* be watered once a day during the growing season. A plant that has been really checked rarely recovers its health and never produces large spikes of perfect flowers.

While I have advocated planting Lilies in the shrubbery border, they must never be planted in close proximity to the roots of trees or to rampant growing shrubs, for the roots of these more robust growers will rob them of the moisture and nutriment intended for them.

Auratum

The Goldband Lily (Auratum) is undoubtedly one of the very finest varieties for the ordinary garden. They attain a height of from 3 to 5 feet and blossom continually from July to September.

The Auratum should be planted in the early spring. Plant the bulb where you mean it to remain permanently for, as I have said, Lilies do not take kindly to change. When you transplant a Lily you can expect few if any blossoms for several months.

The Auratum must be planted in well-drained, sandy soil which must also be fairly rich. Set the bulb quite deep. Shallow planting seems to be the reason so many people fail with this variety. During a prolonged drought, which we so often

have in August, the Auratum should be watered once a day. As soon as the flowers fade, cut them off. By doing this you will encourage other buds to develop and those already developed to unfold.

Auratum Heavy Feeder

Auratum will not stand for any encroachment of weeds about its roots. If weeds are permitted within a foot of this bulb it will soon show signs of deteriorating. The Auratum is a heavy feeder and refuses to share its food, derived from the soil, with other plants or weeds. Therefore, it is wise to turn over the topsoil about its roots at least once a week during its blooming season. This may seem like work to some people, but the large, perfectly formed blossoms which will surely result from this treatment, will be ample repayment for the necessary labor.

Powdered Tobacco for Red Spider

After a rain, while the flower buds are still damp, it is a good thing to dust some finely ground or powdered tobacco over the tops of the Auratum. This treatment will prevent an attack of red spider or aphis, either of which insects may at any time assail the Lily.

The Auratum is the most gorgeous and most reliable of all the hardy Lilies. When selecting bulbs of this variety, choose heavy ones, as they are usually the ones with the strongest constitutions. The writer can recommend the Auratum in every way for a home garden. The Goldband Lily should be in every garden. It is not only attractive but easily grown.

Brown's Lily

Brown's Lily (browni) is the variety with immense trumpet-shaped flowers whose brown anthers form a great contrast to its white petals. The outside of the petals are a soft, reddish brown, and it does well when interspersed with hardy flowers which give their roots the necessary protection.

Madonna Lily

The Madonna Lily (Lilium candidum) is also a splendid variety. This, unlike most Lilies, does well in sunshine or shade and in light or heavy soil. In Europe it is spoken of as the flower of the poor, because it flourishes in humble places where its owners are too busy to give it much care.

Plant Madonna Lilies in September. It is amazing how this bulb will multiply if given the proper environment, especially if dug up frequently and the bulblets removed. If possible, plant these bulbs among the Larkspur.

Chapter XIX

DAHLIAS AND GLADIOLUS

SOME flowers—for example, the Orchid—require a conservatory in which to develop their aristocratic blossoms. And the stately Lotus must be the center of attraction of an estate. But the Dahlia requires merely a home garden.

In no place are Dahlias seen to better advantage than when clustered about a low, rambling farmhouse or in some suburban garden. Like the Geranium, it is essentially a home flower, and, while we see unusually fine specimens at the flower shows, the ones we see nodding in friendly fashion above some garden gate are the ones we love the most.

This flower, of humble origin, today rivals the Chrysanthemum in beauty, and it is just as easily raised. So if you do not already number Dahlias among your garden family, do purchase some this year. You will be so glad you have them when late summer comes for then your Peonies and Roses will be mostly memories, you know.

Pay Attention to Soil

The success of Dahlias depends entirely on the way the soil is prepared for them. Unlike most tubers, they do not thrive in rich soil. This enables those of us with the ordinary clay soil that we are apt to find in city gardens—or even in a town where the ground has been filled in and has a decided strain of ashes in its composition—to grow these desirable garden blossoms.

If you want Dahlias, plough or dig the ground early. Dig deep; the deeper the better. Do this just as early in the spring as the ground is workable. Then let it settle and turn it against just before setting out the tubers.

Fertilizer

If the soil is already fertile use no manure or prepared fertilizer, but if the ground is very poor, spread it with manure before digging. You do not require a great deal of fertilizer for, as I said, this variety of plant does not require too fertile a loam. Should manure be unobtainable, choose a fertilizer not too rich in ammonia or nitrogen. The largest and most successful growers in the world tell us the proper preparation is a half ton of fertilizer to the acre. For the average garden, where you have probably a dozen plants, a pound would be sufficient.

Start Planting May 15

The middle of May seems to be the right time to plant Dahlias in the Middle States. Set them 4 to 6 inches deep, no deeper; and in order to leave room for future development, set them 2 to 4 feet apart. Allow but one stalk to develop from each root. Cut the others off. This treatment will bring forth a fine, healthy plant.

In the late fall, after the Dahlias have flowered and just before frost, cut the plants down, lift the tubers with a digging fork (never with a spade), and place them in some sunny corner of the porch until the soil about them is dry, then shake it off and place them in a dark, dry place where the temperature stays around 40 degrees, such as the furnace cellar or some closet shelf.

You should always turn the tubers upside down. This will permit any moisture to drain out through the stems. If you do not take this precaution moisture may collect in the hearts, and if it does it will be the direct cause of starting decay and render them useless for future planting.

Gladiolus, or Sword Lily—pronounce it as you choose—is your flower, as it is mine. It is as decorative and happy on an

DAHLIA

Till fell the frost from the clear cold heaven,
As falls the plague on men,
And the brightness of their smile was gone,
From upland glade and glen.

—*Bryant*

estate of acres as it is growing in the tiniest city backyard. It is one of the most useful, beautiful and satisfying of all our garden flowers.

Blooms in August

Another point in its favor, aside from its beauty, is the fact that it blooms in August, the time when there is a dearth of other flowers. If you know the Gladiolus you know how easy it is to raise, but as some may this year be growing it for the first time, do let me impress on you the importance of setting out your bulbs fifteen days apart. If you set out the first relay quite early and the rest at fifteen-day intervals up to June, you will be sure of a succession of flowers from July until late October. A Gladiolus bulb requires only 12 to 14 weeks to come into bloom.

Preparation of Soil

Spade the ground deep, the deeper the better, and if manure is used let it be old and very well incorporated with the soil. Then dig a trench or furrow and plant the bulbs about 4 inches apart, either in single or double rows, according, of course, to the size of the bulbs. Set them about 4 to 6 inches deep. Here you should be guided by the character of the soil. In heavy soil I should say 4 inches; in light soil 6 inches would be better.

Plan to keep the rows 2 feet apart, which will permit of easy hoeing and also permit you to walk between the rows when you are cutting the tall spikes. It seems that the Gladiolus really loves to be cut and carried away to glorify some cool hallway or restful living room. And let me suggest that you cut the spike when the first bud shows color; it will open in the house and show a better color than when left to open, perhaps more naturally, in the sun.

Plant Gladiolus in Shrubbery Border

If your garden is a small one that boasts of a hardy shrubbery border, you can plant the Gladiolus here, but they enjoy

best being alone because they like a little more stirring of the earth than is generally possible in a mixed border.

Usually I recommend purchasing named varieties of flowers, for then you are sure of getting just what you want. But when it comes to Gladiolus, the varieties are all so fine that I think it is a case where I want to suggest that you buy "mixtures" and await the glad surprises that will greet you as each bulb unfolds its treasure. And, you know, "mixtures" always cost much less. By "mixtures" I mean a seedsman's assortment.

The Gladiolus originated in Africa, but to America belongs the credit for the development of the finest varieties, both for size and color.

Chapter XX

ASTERS AND OTHER ANNUALS

SO many persons growing Asters for the first time, sow the seed in the open border about the middle of May. This is perfectly correct procedure if you want late flowers, but if you want early blossoms do let me urge you to sow at least a part of the seeds in flats (shallow boxes) in early April. Sow only in well-prepared, rich, friable soil, if you would have large flowers.

Early Sowing

By early sowing you will be assured of blooms from July until late September or October, which will be much better than having the first buds unfold in late August as will happen if you postpone sowing until May.

When the seeds have germinated and the tiny seedlings show their third leaf you must either thin them out or transplant them. This will give each plant a splendid chance for individual development before being transplanted to the open border. Seeds sown in the house have such fine constitutions that you need have no fear about setting them out in the open about the middle of May. They will, after such a good start, be quite able to take care of themselves.

The remaining part of the Aster seed, on which you depend for late flowers, when sown in the garden must be sown with care. First, select a bed where the soil is most friable and pulverize it to as fine a substance as possible. Sow the seeds thinly in rows at least 1 foot apart, and after distributing the seeds press the soil down quite firmly about them.

SWEET ALYSSUM

And each flower and herb on earth's dark breast
Rose from the dreams of its wintry rest.

—*Shelley*

A Cheesecloth Awning

These young seeds will come up faster and more surely if you protect them from the strong rays of the sun for a few days. The matter of proper shading isn't a difficult one. All that is necessary is to drive a post in each corner of the bed to extend about 1 foot above the ground, and then spread muslin or cheesecloth between the points of the posts.

Watering

Water your Aster seeds every morning, using the finest nozzle of the watering can (or if your patch is large, a hose). I recommend a fine spray so that you will not disturb the seeds. If you carry out these instructions I cannot imagine failure. You see, if you sow thinly (sparingly) you do not have to thin the plants out and by June 15th they will be ready to be set in their permanent beds where each plant should be given space of 6 or 8 inches each way.

Asters are rather greedy. Pulverized sheep manure, sprinkled over the surface of the soil every other week, will assure them plenty of nourishment.

Aster Beetle

Should their arch enemy, the Aster beetle, come marching up as they come into bloom and attempt to devour them, dust the plants with "Slug Shot," which will usually rout the enemy.

Sweet Alyssum

The old-fashioned Sweet Alyssum is one plant that we gardeners cannot get along without. We need it for the touch of cooling white it gives our border and also for edging in paths and plots, for what can be more beautiful than our plot of blue Lobelia encircled with its shining band of Alyssum.

This little plant with its small white flowers blooms continually and the tiny bushes seem fairly smothered with their wee white blossoms.

One of the best varieties of Sweet Alyssum is Little Dorrit. Carpet of Snow is another variety that is a profuse bloomer.

Marigold

The Marigold is another flower that is sure to thrive when planted early in May or late in June. All varieties of Marigolds are showy and most of them are profuse bloomers. The Meteor, a new variety of French Marigold, is unique in many ways and is therefore a worthy addition to our garden. Its color is unusual, being a sulphur yellow with a deep orange margin on the petals. The effect of a mass of these blooms is gorgeous.

Nasturtiums

Many people plant Nasturtiums quite early and will be surprised to know that they do equally well, and frequently better, when the seed is sown later. However, care has to be taken in this case to select early flowering varieties, of which Tom Thumb is the best. This variety soon forms perfect mounds of growth which, once established, will continue to flower until frost.

Nasturtiums do better and flower more profusely if the blooms are closely cut. The following are Tom Thumb varieties of established merit, which give a generous flow of color to a garden: Golden Gate, immense flowers of a rich orange; and Kaleidoscope, which vary in color, frequently all the flowers on one plant being different. Never give these plants too much water; if you do, you will have soft, luxuriant foliage but few flowers. Should the plants be attacked by black flies, use any nicotine preparation and you will soon route the enemies.

Cosmos

Our gardens would be incomplete when fall comes if we failed to have Cosmos. They must be planted where they will get all possible sun and must be kept well watered. Spray them frequently with the full force of the stream from a garden hose; this not only keeps the foliage clean but also keeps the plants free from insect enemies, especially the beetle, which is their most dreaded foe.

The Lady Lenox Cosmos, both the pink and the white varieties, is the most desirable kind for late planting. Cosmos has beautiful foliage which makes it always attractive.

Petunias and Mignonette

Almost any variety of single Petunias will do well if the seed is sown in June, and all varieties are equally good.

Mignonette is such an old friend of every one that it needs no special description.

Coreopsis

And there's the Coreopsis grandiflora, frequently spoken of as the Jubilant Daisy—a name that seems to be particularly fitting for this friendly blossom. The Coreopsis never causes any extra work and does enjoy being left alone. Only keep the weeds from encroaching on its special territory and it will ask no more. It will blossom gaily from early June until late September, and the more you cut of its graceful blossoms the more you will have. What more could you ask?

Forget-me-nots

When planting your border never overlook the Forget-me-not. This old-fashioned garden flower has been keeping up with the times and each year seems more gorgeously arrayed. It has grown so in size you would scarcely recognize it as a descendant of the wee Forget-me-nots that peeped shyly over the box edging of your grandmother's flower beds.

The Forget-me-not, however, requires some watching. If you see the remotest suggestion of its going to seed, cut it back. This will cause the plant to send forth a new top growth and hence, prolong its season of flowering.

Pyrethrum

Do let me urge you to plant a few Pyrethrum. This lovely plant is perhaps the best of all the hardy perennials for general decoration of the flower garden and for cut flower purposes. The flowers resemble miniature Chrysanthemums and have the

same lasting qualities as do the Chrysanthemums. They will grow in any garden loam, but simply revel in heavily manured and well-prepared soil.

You will find it a great advantage, in growing Pyrethrum, to mulch them in the early summer and watch them every day during prolonged dry spells. They will reward you amply for any extra attention you may give them. Cut off the old stems in August and in early autumn you will have a fair second crop of blossoms.

Chapter XXI

LARKSPUR AND SWEET PEAS

Two of the Daintiest and Sweetest Flowers We Have

BLUE flowers are spoken of as "the patricians of the border" —probably so named because there are so few of them. You know the reds and yellows predominate, and as both red and yellow are warm colors we always welcome the blue varieties.

Hardy Perennial Larkspur

One of the most worth while of all the blue flowers is the Delphinium (Hardy Perennial Larkspur). This is such an easy plant to manage that it should be in every garden. It is especially suited to the city garden because, not being a rampant grower, it never crowds or disturbs its neighbors.

Sow Seed in February

The seed of the Larkspur should be sown in February or March in hotbeds or shallow boxes. Should you live in an apartment it will have to be a shallow box or flat; but if you have a garden under the blue sky, then I hope you have a hotbed. A hotbed is so useful.

After sowing the seed, keep the flat shaded for a few days. And keep the soil in which the seed is germinating both damp and warm. Never set the flat on a radiator but keep it near one and away from drafts, which are fatal to seedlings of any kind.

When the wee plants have attained a height of about ¾ of an inch they should be transplanted to other flats. There

DELPHINIUM

When he called the flowers so blue,
Stars, that in earth's firmament do shine
—*Longfellow*

they may remain until they are set in the open border in the spring. One especially nice thing about the Larkspur is that seed sown in February or March is sure to blossom in July or August. The second year it is well to transplant the finest specimens to some permanent location in the garden.

Never Permit Manure to Touch Roots

In preparing a bed or border for Larkspur, some manure should be added to the soil but it must never be permitted to come in direct contact with the roots of the plant; if it does, grubs are apt to attack the root and later destroy the plant. Larkspur refuses to grow in any but well-drained soil. So if you are uncertain about drainage, better add a generous supply of sand to the soil.

Should you already have Larkspur in your garden, you will find that a little finely ground bonemeal dug around each plant early in May will be of great benefit.

Combating White Grub

Like most garden plants, the Larkspur has an enemy in the white grub, which seems always on the alert to make an attack. One way to combat this enemy is to sift coal ashes over the crown of the plant. Do this in late autumn; it will effectually eliminate the pests.

Stake Plants Early in Season

The Larkspur will be likely to do much better if you stake it when it has attained a height of about 3 feet. This protects the tender stalks from the winds which frequently play havoc with them.

To Induce a Second Crop of Flowers

Larkspur starts to flower about the 20th of June. When the flowers are over, cut the stalks back close to the ground. This will cause them to send forth a second crop of foliage and flowers, and unless you live where the season is short, you can usually have three lots of flowers. Each time that you cut

them back incorporate bonemeal with the soil about their roots.

Sweet Peas

Sweet Pea seed should be sown early in the spring or, better still, in the early fall. Should they start to sprout and then be killed by frost it will not injure them. When sown in fall they will require winter protection in the form of litter and manure hilled high about their roots. If you cannot do this, as a next best thing start them in pots in the house, and as a last resort, start them in the open, but do it early.

If you did this they will have had an early start, and should develop a good strong growth. In this case the dry weather of early summer will not be apt to injure them in the least. Four or five days advance sowing of Sweet Pea seed frequently spells success.

Sweet Peas—Spencer Type

At first I enchant a fair Sensitive plant,
Then I flirt with the Pink of perfection;
Then I seek a sweet Pea, and I whisper, "For thee
I have long felt a predilection."
—*T. Haynes Bayley*

So many letters come to my desk, each bringing the same question:

"What shall I do to make my Sweet Peas bloom? The vines look healthy, but I want flowers, not foliage."

Keep Them Growing

There is only one answer to this question—Keep them growing.

When the dry weather we are so apt to have in early June sets in, Sweet Peas stop growing. And about this time myriads of aphis appear. If, however, you can succeed in keeping your vines growing you need pay little attention to the aphis, as this insect rarely attacks healthy plants, preferring half-dead, stunted plants on which to feed.

Daily Watering

To keep your plants growing you must water them every day it does not rain. This does not mean merely pouring water on the soil. It means sprinkling the tops of the plants and seeing that the water reaches every stem and leaf.

If you give your Sweet Peas plenty of water and cultivate the soil in which they are growing every few days, and then about the middle of June give them some stimulation in the form of some weak liquid manure, all will be well. You will thus force them to start sending out new shoots.

To Route the Aphis

Should a few of the more persistent aphis remain, even after this treatment, you can easily destroy them with tobacco powder. Dust this over the plants quite early in the morning, while they are wet with dew.

Supports

Another matter of great importance in Sweet Pea culture is that of supports. If you do not give the plants proper supports they will fall over; and after they have once fallen, any flowers that so develop will curl up on the ends and be of little

further use. From the time the vines are 6 inches high they must be trained and the more attention you pay to this phase of their culture, the more delighted you will be with their blossoms. Well-trained Peas always have long, stiff, straight stems.

Some successful growers depend on supporting their Sweet Pea vines on "Pea brush," meaning branches of dead shrubbery stuck into the soil alongside the vines. The Peas delight in rambling over these branches.

Other gardeners prefer straight stakes, driven into the ground at intervals along the row of Peas. These stakes are joined by strong wire run from stake to stake close to the ground and from top to top. Then parallel lines of strong twine are run from ground wire to top wire. This forms an ample support for the vines.

The most practical and easiest method is to drive strong stakes into the ground 6 feet apart. Join these stakes with a light top rail. To this top rail attach a 4-foot high, 2-inch wire netting. Such a support is easily made and vines trained against it should produce a wealth of perfect flowers.

Chapter XXII

ROSES

THERE are two things you must always consider before starting a Rose garden. First, is location. This is very important.

Second, and equally important, is a wise selection of varieties. Do not be governed by the pictures you see in the catalogs. They are lovely and convincing, but read the cultural notes carefully. See whether the conditions in your garden are the same as those described in the catalog. Take temperatures into consideration, also length of season, and soil. If these are favorable, you should have Roses that will be a real joy all summer.

Sun an Essential Factor in Rose Growing

When selecting the home for your Roses, choose a sunny spot. This is essential. You cannot grow Roses in shade. Also choose a place where you are certain the soil is free from all tree roots or the roots of shrubbery or vines. Roses want the soil to themselves. Roses and shrubbery or strong growing vines never make good neighbors.

Roses Responsive to Good Care

After you have chosen a location, the next thing is to consider the preparation of the soil. The more care and labor you expend in this detail the better results you will have. Roses are almost as responsive as people. They will do well

in any fertile ground, but they require drainage. They will not do well in soggy, sour soil. Large growers all agree that topsoil from a pasture and well-rotted cow manure suit Roses best.

Preparation of Soil

It is necessary to prepare the bed days in advance of setting out the Roses. The soil must be dug to a depth of at least 2 feet and mixed thoroughly with well-rotted manure or pulverized sheep manure. Bone dust, in the proportion of 10 pounds to every 100 square feet of surface, will also answer the purpose. If a layer of ashes is necessary for drainage purposes, dig the ground a little deeper. Fill in with a soil composed of equal parts of good garden loam and well-rotted cow manure or a mixture of sheep and cow manure. Some authorities recommend some sand in Rose soil, but if you are sure your drainage is right, this isn't necessary.

After ten days have elapsed and you are sure the soil has settled, the surface of the bed should be about 1 inch below the level of the adjacent surface. Never make the plots too large, because you must consider the time when you begin to gather the blossoms. You must be able to reach the middle of the bed comfortably without stepping on the outside bushes. A convenient width is 5 feet; of course, the length is immaterial.

Plant Your Rose with Care

It is an open question when to set out Rose plants. Some prefer late planting and some early. Most of the larger and most successful growers advise early planting. In fact, they suggest planting just as soon as it is certain the frost is out of the ground.

My experience has been that May first is about the right time; though, of course, even this is a movable date, for so much depends on the season. Do not set out any but the very healthiest plants, grown by reliable dealers. Plants that have been kept in storage for months after being imported, are sure

to prove disappointing. Pot-grown plants are what are needed.

Spread Out the Roots

Just how you plant depends entirely on the kind of Roses you set out. If you purchase them in pots, remove them most carefully from the pots. Try to keep the soil intact. Roses are particular about the way they are handled. You should, when planting, open quite a space in the soil and spread out the roots; never cramp them into a small hole. Some additional manure may be placed underneath them with a layer of soil on top. Never let the roots come directly in contact with the manure.

If the Rose is a bush plant, set it so deep that only the branches are visible above the ground and never the main stem. But keep in mind that too deep planting is as bad as too shallow. Two to four inches of loose branches may be under the surface, but no more. If the plant is a budded or grafted plant, be careful that the bud or graft is fully 3 inches below the surface. Pruning is the most important feature of the successful growing of Roses of all kinds. The first thing to consider is whether your Roses are on their own roots or budded. Imported varieties are almost always budded on wild Manetti stock. These appear strong, make a splendid start and flower the first season with promise of a bright future. The second season, having survived the winter, they should be well cut back (in the spring) and all dead growth removed. Also be sure to remove all growth below the place where they are budded. If you do not do this you will soon have a bush full of vigorous foliage, but without flowers, as the wild growth from the roots will soon take entire possession of the bush.

Pruning

Roses that are not budded should be cut back every spring. This will mean that all growth that follows will be flowering wood and the heavy, strong shoots that start from the ground will produce the best flowers.

After trimming the young plant, press down the soil above the roots. These directions, regarding pruning, of course, apply only to new plants. Old established Roses are treated quite differently.

Spacing a Rose Plot

Young plants should be set out about 1 foot apart, each way. One-half of them may be removed and planted in another spot the following year. This method will obviate unnecessary cultivation and make a better showing the first summer. Mulch the ground during the summer with cow manure or peat moss.

You cannot do too much for Roses, for where they are truly cared for they will respond. You know that people who really love Roses usually have the largest and most beautiful Roses in the vicinity, and in their gardens you rarely find insects or fungous growth.

Roses Are Good Feeders

When your Roses start to grow is the crucial period. From the moment the first leaf begins to unfold until the last leaf has withered, you must be ever vigilant—always keeping in mind that all Roses are good feeders. Therefore, if you want many and fine flowers you must feed them from time to time throughout their growing season. Ground bonemeal and pulverized sheep manure is the most acceptable food you can give them.

Many people, especially those growing their first Roses, are in doubt as to when to prune them. This work may be done any time after the leaves have dropped, from November until April. Hybrid Perpetuals can be pruned back to two or three buds, or eyes, every season. Tea Roses require very little pruning—merely a thinning out of the shoots.

Prepare Ground Ahead of Planting

Another mistake most amateurs make is to order Roses any time they happen to think about it. The Roses are de-

livered in due course of time and their delivery is a signal to prepare a plot in the garden. This is a foolish plan. It is much more sensible not to order your Roses until you are ready to set them out—and, of course, this means that you have your garden ready for them ahead of time.

After your Roses begin to sprout and develop new growth, some insects are sure to be on the alert and will at once begin to see how much of this tender new growth they may devour. So at this time I want to give some general method of successfully waging perpetual warfare against these enemies—for perpetual it must be.

Green Fly or Aphis

The green fly or aphis is about the first enemy to appear. They alight on the buds of the young shoots and not only begin to partake of one meal but many meals. In fact, unless they are disturbed there will soon be no shoots left.

To rid the plant of these enemies, spray them with tobacco solution, or, if it seems easier, dust them with tobacco dust, being sure to apply this dust immediately after wetting the plant. If applied while the plant is dry, the first puff of wind will blow it away, but if it is put on while the plant is wet, it is sure to adhere.

Rose Bug

The Rose bug requires no description. You are sure to know these brownish beetles which eat both leaves and blossoms and are so hard to dispose of. Hand-picking is a sure remedy but far too laborious to recommend even to the most enthusiastic gardener. Better purchase some Melrosine or any other Rose bug exterminator. Almost all seed houses sell these insecticides.

Rose Slug

And for the Rose slug—that pernicious, light green worm which eats the leaves—the best remedy is to dust the plants with Hellebore; or spray them, if it seems a more convenient

method, with a solution of one ounce of Paris green to 10 gallons of water. Paris green is a poison and must be kept away from pet animals or chickens.

For Mildew

Sometimes, especially during a prolonged damp, cool spell, the foliage of your Roses may become affected with a grayish-white film. When you see a plant so affected, immediately dust the plants with flowers of sulphur, or syringe them with Bordeaux mixture.

Black spot is a disease for which there is a control but no definite cure. This malady weakens the plants and eventually destroys them. The disease is not hard to diagnose. The first symptom is the appearance of circular black spots on the leaves. The affected leaves soon turn yellow and begin to fall off. Black spot is always more virulent and, I might add, more prevalent during the latter part of August, when we have cool nights and heavy dews. Whenever you detect the remotest sign of the disease, begin at once to collect all yellow leaves. These must be burned in order to control the spread of the trouble. Bordeaux mixture is effective in a measure, but I consider a mixture of lead arsenate and powdered sulphur a much better weapon with which to combat this malady. Use eight parts of the sulphur and two parts of the lead arsenate. These should be sprayed over the bushes with a dust gun. Be careful that the powder reaches both sides of the foliage.

Reliable Varieties

As we turn the pages of the new Rose catalogs, we naturally want all the varieties they offer. But as most of us have limited gardens and perhaps more limited purses, it is usually a case of having a few of those we want most, and unless we are experienced in the culture of Roses, those we want most may not be those most suitable for our particular gardens.

The hardy hybrid perpetuals—which, before the development of Hybrid Tea Roses, were the most popular type for

garden planting—are the best variety for localities where the severity of the winter weather prevents the planting of Hybrid Teas. These will live out even in the most northern sections of the United States. Tender Tea Roses unless very strong bushes, seldom survive zero weather. They should be planted in conjunction with other sorts.

Varieties for the Amateur

Among the most worth while varieties of this class are the Ulrich Brunner, a bright, cherry-red which always does well; the Magna Charta, a bright pink which is also a wise choice; and the Frau Karl Druschki which should not be overlooked, for it is one of the finest white hardy Roses we have, a strong grower and perfect in color and form. The above are but a few of the many varieties of hybrid perpetuals, but they are kinds particularly suitable for the amateur to grow.

Baby Ramblers

During the last few years it has been popular to plant Roses in beds much as one would plant Geraniums. Such beds are hardly suitable for small yards because, to make a real spot of color, the bed should be quite large. But should you want a Rose bed, by all means fill it with Baby Ramblers. When they are in full bloom in June and become entwined, they are really beautiful. Of course, when their season of flowering is over there is little to interest you in them during the rest of the summer, as their foliage is not especially attractive.

For plot planting when there is space for individual development, always choose some of the better known Hybrid Teas. There are 12 varieties that I know from personal experience to be as reliable as they are lovely.

Twelve Worth While Varieties

Amalie de Greiff: A rose-tinted white with unusually stiff stems—a worth while attribute for any Rose. Florence Pemberton: Flowers profusely throughout the season. Continues in good shape in the hottest weather. Color, creamy white

suffused with pink. Gruss an Teplitz: Spoken of quite truthfully in the seedsman's catalog as the Rose for everybody. It succeeds under most ordinary conditions. Its color is richest scarlet. Hadley: One of the most admired Roses at the annual Rose shows. Color, a rich crimson. Unusually fragrant. Irish Fireflame: A splendid single-flowering variety, bearing flowers in clusters of five. Color a rich, deep orange splashed with crimson. Joseph Hill: A lovely salmon color and always ready to unfold a wealth of blossoms. Francis Scott Key: A truly American Rose of American origin. Large, well-formed flowers, deep even red in color. Killarney: An Irish Hybrid Tea. The most popular of garden Roses. Color, a sparkling, brilliant pink. Mrs. Aaron Ward: A strong, compact grower. Flowers are beautiful when in bud or full bloom. Color, a distinct yellow, shading to lighter toward the edges. Ophelia: A variety you should have. Flowers held erect on strong, stiff stems. Color, a delicate tint of salmon shaded with rose. I would be remiss indeed if I did not mention Souvenir de Claudius Pernet, the new yellow Rose which startled flower-lovers at the recent shows. You will be enthusiastic over Pernet and never regret having one.

Chapter XXIII

CANTERBURY-BELLS, PANSIES, ZINNIAS AND GILLIFLOWERS

All Gay and Colorful and, I Might Add, Easily Raised

THE last few years the Canterbury-bells have been irresistible. The Campanula family of hardy garden plants cannot have too much said in its favor. These plants are not hard to raise. Should you have a rockery, or rock garden, you will surely want some of the dwarf varieties, but for general planting in beds and borders the Canterbury-bells will be the kind you will want.

They are so varied in color that I never have been able to decide which I like best, the white, the pink, or the blue. My advice is to have at least a few of each color, since they never clash with their neighbors or each other. The plants are just the thing for the back row of a border, because healthy ones attain a height of 3 feet and, being compact growers, they form a background of green for the lower growers of the front rows.

Canterbury-bells Should be Planted Early

Always plant your Canterbury-bells as early in the spring as possible. Early in the season stake the foot-stalks with thin, yet strong, canes, to prevent damage from winds.

The surface of the soil around your Canterbury-bells should be frequently stirred; this will aerate the soil and encourage growth, and at the same time keep down the weeds.

If the weather be dry and hot, which it likely will be at some time in July or August, give the plants a thorough soak-

ing with clear water and then give them a mulching of short, decayed manure, leafmold or, if these are not available, use the rakings of grass from the lawn. Any of these will prove a great aid in retaining the moisture.

Should you be wondering where you could grow them, do make them, if possible, next-door-neighbors to your early Phlox. These varieties combine so beautifully. Canterbury-bells have a long flowering season and produce their flowers in profusion.

Pansies

Few flowers excel in beauty and usefulness the Pansy, or "Heartsease," as it is often called. The name Pansy is derived from the French word "pensee," meaning thought—the idea suggested by the flower's peculiar habit of inclining its head as if in a thoughtful mood.

There is so much individuality about each blossom that it is a general favorite with every lover of flowers, but especially so with the little folk. To them each Pansy is a face and each face suggests a story.

This tiny plant commences to unfold its gorgeous colors immediately on the departure of snow in the spring, and will continue flowering more or less, in certain localities, until the ground freezes in the fall.

Pansy the Amateur's Flower

More particularly than any other plant, the Pansy is the amateur's flower. Anyone having a few feet of ground with a sunny exposure and plenty of manure can grow this charming plant, if they will only take the trouble to familiarize themselves with its needs and habits. It is properly a biennial, but can be propagated by cuttings as well as from seed. Growing from seed is the method most generally adopted.

Sow Seed the First of September

To have really fine blossoms in early spring, the seed should be sown about the first of September in a partially shaded place. After the plants are about an inch high they should be

transplanted, about 2 inches apart each way, in a protected situation where they can remain all winter with perfect safety. They are benefited by a slight protection of stable manure.

Gilliflower

"Stocks," correctly speaking. But to my mind the common name of Gilliflower, which everyone knows, is much nicer and surely more suggestive of this friendly, old-fashioned garden plant.

While neither gay nor giddy, the Gilliflower will lend a note of subdued but lovely red, blue and lilac, yellow and pure white to any garden border. Few flowers can flaunt more colors and few exhale a more delightful fragrance than does this plant.

The Gilliflower is best grown from seed, which can be sown in March in shallow boxes about 3 inches deep. Cover the seed only very slightly with soil. In fact, use merely enough to keep the seeds from blowing away.

Be sure in growing Gilliflowers to keep a close watch out for weeds, which, if permitted to run rampant, will soon make use of the nutritive principles of the soil and as a result your Gilliflowers will die of starvation.

Loosen the soil at least once a week about the plant's roots. This permits them to receive the full benefit of rain and dew which they never do if the soil is permitted to become hard and baked.

Zinnias

Zinnias "gayer than tomorrow" is one writer's description of these most colorful of garden flowers. If you do not want Zinnias it is because you haven't seen the newer varieties, which are surely gorgeous and so easily raised. All they require to keep them happy is to have their rather rusty, hairy foliage sprayed. This not only inspires their health by keeping the earth a bit moist but it keeps the foliage clean. Zinnias stand drought better than most garden plants, but even so, they appreciate an occasional drink.

Chapter XXIV

CHRYSANTHEMUMS

"Flauntin' Chrysys' 'bout to die,
Wavin' to de year, goodbye,
Sometimes think it's best of all,
In de gyarden in de fall."
—*Charles William Bracket.*

CHRYSANTHEMUMS are a fall flower, coming into blossom at a time when other flowers are past their prime. They are what growers call a one-season flower, meaning that that they complete their growth and develop their crop of flowers in a period of from six to eight months.

For this reason the Chrysanthemum plant must be treated in such a way as to keep it making steady progress from start to finish. If its growth is checked for any reason, the flowers may be small, or they may be few, or both.

Easily Cultivated from Cuttings

The Chrysanthemum is most easily cultivated from cuttings. These cuttings should be taken from the dozens of shoots that have sprung up about the base of last year's stalks, and should be started in 3-inch pots as early in the season as possible. They will do best in a light, rich soil. Keep them moist at the roots and place them in a warm, sunny place.

About six weeks after starting them, examine the soil in one of the pots in which you have a cutting. If it is filled with roots do not be surprised, but simply take it as a signal that the time is at hand for the first shift, which in all cases should

be to a pot two sizes larger than the 3-inch ones. Do this work at once. If you put it off the roots may become cramped, and as a result the general development of the young plant will be checked.

Second Shift

The second shift should usually be two months after the first. The third will depend on the length of time it takes for the plants to develop enough roots to show on the outside of the ball of soil in which the plant is growing.

There is no variety of flowers that are more responsive to good care than the Chrysanthemum.

Many amateurs object to giving the plants more than three shifts, but if you would have the maximum amount of success make four shifts. The last one should be between the middle and last of August, which is the period just before the buds begin to show.

A 10-inch pot is not one bit too large for a well-developed plant of these shaggy blossoms.

Heavy Feeders

Always keep in mind, when growing Chrysanthemums for the first time, that they are "heavy feeders." Therefore, as they receive their food from the soil, they must be planted in a loam rich in nutritive principles. You cannot overfeed a Chrysanthemum. One of our largest and most successful growers recommends a soil made up of garden loam and thoroughly rotted cow manure, two parts of the former to one of the latter. The manure, however, should be so old that it is black and friable.

Should you be unable to obtain the rotted manure advised, use bonemeal, finely ground, mixing it thoroughly with the loam in the proportion of a tablespoonful to a quart of loam.

Watering

Another thing to remember is that the Chrysanthemum likes to drink as well as it does to eat. From the day you

start the cuttings until the last bud unfolds, water your plants every day; from June until September water them twice a day.

About June 10th the specimens that were started in April should be quite well established and the time is at hand when they will require their first pinching (removing the extreme end of the shoots). This is a very necessary step, for by this method we induce the plants to branch and this indirectly increases the number of flowers.

Pinching Back

After these first shoots are about 6 inches long, go over your plants again and pinch the end off of each shoot. This will cause them to branch again.

Keep up this process of pinching as the plants grow, until the 10th of August. After that date never touch them, as they need the remainder of the season for setting their buds and developing their flowers. The object is to develop good, strong young shoots first, then vigorous foliage and straight, firm stems, just as many to each plant as possible. Each stem, you know, means a flower.

Through the summer season keep your potted Chrysanthemums in the sun. The shade of trees, or even that of a fence or building of any kind, has a tendency to draw them up, which means that they will have long shoots; and too often the result is that only two or three shoots will produce any flowers and these but indifferent specimens.

Aphis

When your plants are in bud is the time for the approach of the aphis, the insect that seemingly delights in eating the terminal ends of the young shoots, especially when these shoots happen to be laden with buds.

As soon as you see the first insect—in fact when you notice the first bud—even if you see no aphis, is time to begin waging war against this enemy. Every time you water the tops of your plants, dust the ends of the shoots with powdered to-

bacco. This is an efficient remedy and will prevent the destruction of your flowers.

When purchasing new varieties let me urge you to add some of the new hardy Pompon varieties to your collection; they will be just what you want for cutting purposes.

Chapter XXV

SHRUBS FOR THE SUNNY AND SHADY SMALL GARDENS

JUST why there is a dearth of shrubbery in so many city gardens I have never been able to understand. Surely it cannot be because people do not like them. More likely it is because of lack of space. Of course in the average city garden, frequently comprised of a space reaching from the back door to the back gate, a distance of possibly 50 feet, and from high board fence to high board fence, a distance of, at most, 30 feet, I must admit shrubbery is out of the question.

This does not mean, however, a bushless garden. Far from it; for in even so small a space, provided you have rich soil and sunshine, you can have one really fine specimen of almost any of the ordinary shrubs, which when in bloom will be, like Aunt Hannah's patchwork quilt, "gladder than tomorrow."

Shrubs in most cases are not nearly as particular about their environment as are most plants; but, even so, they refuse to do their best when planted in an angle between two high board fences, which prevents them from receiving either sunshine or fresh air.

When your garden is small the corner opposite the back gate at the foot of your ground is undoubtedly the best location for a shrub. In this way it will never be in the way of clothes that are being dried, and at the same time it will provide a pleasing vista from the house. But, as I said before, no shrub will ever do well in an angle of a high board fence. So if you

would have shrubs—and I hope you will—remove the high fence and in its place plant a hedge or use a low iron or wire fence. By removing the old, high fence you will seemingly be increasing the size of your garden and you will also be adding to its sunshine.

Eight Reliable Shrubs

In a sunny garden you have a wide choice of shrubs and most of them are reliable. There are, however, eight that I consider well suited for the average city garden.

The first is the Azalea hinodegiri, a Japanese variety bearing masses of fiery single flowers. It is a low-growing shrub which you will be sure to admire.

The second is the old-fashioned Lilac bush which we all love. All Lilacs are lovely but somehow the common purple one is the variety we want most.

The third is the ever-jubilant Forsythia which unfurls its lovely blossoms as the last snowflakes are melting.

And fourth, there is the Berberis thunbergi, or Japanese Barberry, a beautiful variety whose fruit remains on the bush most of the winter.

The fifth, Spiraea vanhouttei, is the most beautiful of all the white Spiraeas.

Sixth, there is the Syringa, which is so well suited to a small garden.

Seventh, the Prunus japonica (double flowering Almond) is never a disappointment. You can choose the white or pink varieties, but I feel sure you will like the pink best.

And as the eighth variety, let me suggest a Deutzia gracilis, which requires no pruning.

In order that those with a shaded garden may not feel that shrubs are entirely out of the question for them, I want to mention a few varieties that will not only live but really flourish in partial shade.

Shrubs, you know, are as much a part of the well-balanced garden as the lawn or flower border. Many shrubs are as

decorative as the ornamental foliage plants. Most of them are useful for cut flowers; others are as beautiful in December as in June. There are so many reasons why we want shrubs.

Barberry Lends Color to a Winter Landscape

The Berberis thunbergi, or Japanese Barberry, while it does well in a sunny garden, will do equally well in a shady one. The small foliage of the Barberry assumes the most varied tints of coloring in the autumn and the beautiful scarlet of its berries is so colorful in the winter landscape. I am sure you will never regret having planted a Barberry and if you do plant one, place it in rather rich soil. Do not prune it too closely—merely snip off the terminal shoots and cut away the dead wood.

California Privet

The California Privet, listed as always reliable, does well in sun or shade. A well-trained Privet will form an admirable background for low-growing hardy herbaceous plants. While the blossoms of the Privet are rather insignificant, the shrub is useful and desirable for other reasons. It is almost an evergreen, keeping quite green later in the season than most of our garden family.

Rhododendrons

We would indeed be remiss were we to leave out the Rhododendrons when we are considering shrubs for shady locations. These shrubs, in their natural habitat, grow in the edges of the forests, where they are continually shaded by the overhanging branches of tall trees, therefore they always enjoy any partially shaded place.

When preparing the ground for Rhododendrons it is always wise when possible to secure a portion of your soil from the woods. Never prune a Rhododendron bush. They are very slow growers and it will take years for a specimen to recover from severe pruning. Another reason why you should never prune them is because they set their buds for the following season's blooms immediately after they have finished flower-

ing, so if you attempt to trim them you are sure to have no flowers for at least two years.

Hydrangea grandiflora

The Hydrangea grandiflora, while it does not flower as profusely in shade as in sun, will produce some flowers in a partially shaded place, and even though the flowers may be smaller and fewer in number, this variety of Hydrangea is worth while. You will be glad you have it.

Chapter XXVI

FLOWERING PLANTS AND FERNS FOR PARTIALLY SHADED PLACES

SUNLESS gardens frequently mean no gardens, which is a pity, for with a little forethought devoted to their planning, small gardens shaded by tall buildings can be made real havens of rest and beauty, places where we are wont to linger.

As I said before, flowering plants must have sun—not necessarily sun the entire day, but at least a part of the day.

The following plants are all flowering and—with the exception of the spring flowering bulbs—while not gorgeous, they are beautiful and worth while in every way.

Myrtle

First let me suggest the Myrtle. This always does well when once it becomes established. It is a rapid grower and will soon form a perfect carpet under a tree, where even grass usually refuses to live. While its flowers are not bright, they are a lovely, subdued pale blue—a rather unusual tint which you will be sure to admire. Myrtle is hardy and will withstand severe winter weather.

Forget-me-nots

Forget-me-nots also do well in partial shade. They must, however, have sun at least an hour a day. You can set out even the smallest Forget-me-not plants at any time during the summer and they at once take hold and blossom until late fall.

When you see the flowers begin to fade, cut them back, and thus encourage them to send forth more blossoms. You must also cut off the dead or dying blossoms to prevent them from going to seed.

Tuberous-rooted Begonias

Tuberous-rooted Begonias get along very well in partial shade; in fact, they crave such an environment. This variety of Begonia needs, however, a rich soil and should never be kept with "wet feet"—meaning they must be placed in well-drained loam. Do not forget that none of the Begonia family are hardy and that the tuberous-rooted varieties must have their bulbs lifted in the fall, to be kept in a dark, dry, warm place until spring.

Now, while those with partially shaded plots cannot have especially radiant gardens in midsummer, they can have a most gorgeous array of colors for at least six weeks in the early spring. This should make up for a bit less color later on. I refer to the spring-blooming bulbs, which always do well in partial shade.

Spring-blooming Bulbs

What could be lovelier than a bed of Darwin Tulips, jubilant Daffodils, starry Narcissus, delicate Snowdrops, piquant Scilla and inquisitive Crocuses, which raise their wee buds before the last snowflake has melted? You see, anyone with a yard of ground at his disposal can have an attractive garden with even these few varieties.

It is a waste of money to plant blooming plants under trees or in the narrow spaces between buildings which are always in the shadow. This is also true of grass. Certain grass may live, but even it refuses to grow abundantly in shade.

Hardy Ferns

But there is one class of plants that will revel in just such locations, the hardy ferns. They will not only grow in partial

shade, but in dense shade. So if you wish to enliven a dark corner of your garden, try a few ferns.

These lovely lacy plants, after their long winter's rest, begin to resume activity in early April. If you already have a colony of ferns, examine their crowns quite early in the spring and you will find they are beginning to swell. This swelling indicates that it is the proper time to begin dividing, transplanting, or rearranging your fernery, if you feel that such work is necessary. If you do this work now you will not injure the young fronds of the plants, or in any way check or stunt their new growth.

Remember, the ferns are just waking up from a long nap and have such a wealth of energy stored up in their roots that a vigorous, rapid growth is assured. They will get the benefit of the showery weather and the dewy mornings and evenings usually experienced at this time of the year, while if you postpone planting until after the leaves have started to grow and the first fronds are half developed, they will lose these advantages and have to battle against warmer days and drier weather.

Deciduous and Evergreen Varieties

The hardy ferns are divided into two classes, deciduous and evergreen. The former lose their fronds in winter and the latter retain them. Plant your hardy ferns with their crowns level with the surface of the soil. Where possible, a good loam into which has been incorporated an ample dressing of decayed leaves will be found to suit their requirements best.

Should you already have hardy ferns, upon examination of their crowns you will find that those which last year had only one crown now have three. Such specimens should be lifted early and divided, leaving only one strong crown. If this is not done you will have only indifferent plants; but if you divide them, removing the young plants to some other place, you will have large, splendid specimens and also a thrifty bed of young ones.

Among the deciduous ferns, I like best the Adiantum pedatum, native Maidenhair, the Aspidiums and the Lastreas. If you have room, a few Polypodiums will be welcome. Among the evergreen, the Polypodium vulgare and the Lastrea filixmas (male fern) are the best varieties.

The idea of planting ferns in shady places is practical and worth while, for a clump of them is equally as beautiful as a bed of blooming plants.

Chapter XXVII

CULTIVATE YOUR GARDEN CONSTANTLY

MIDSUMMER is the time in the "affairs of the garden" when we must be ever diligent. There are two enemies we must constantly combat, drought and insects.

Watering the entire garden every day isn't always practical. It takes time and in midday hours the sun prohibits such work.

Of course, some watering must be done each day, except when there are showers. There are some very much exposed locations that dry out more quickly and simply must be given water if we would have our flowers live. But there are other spots, especially where we have our herbaceous stock, that will get along for quite lengthy periods provided we have an occasional shower.

Now, while we can to some extent forsake the use of the garden hose, we must be vigilant in another direction—

We must cultivate.

Constant Cultivation

This means we must get our hoes, and in the early morning and in the twilight, dig. There is no especial reason why I designate early morning and evening for this work, except that during these hours the work seems less laborious.

Before the sun is quite up garden work is delightful. The dew is on the blossoms and everything seems so fresh. Later in the day, when the sun is in the zenith, we soon grow tired and we do the work poorly, and frequently we risk being made really ill by the heat.

An Early Start

So let me urge putting on some loose gloves and starting early. Getting up with the birds is never a burden. Try it if you don't believe me.

Most people think hoeing is injurious to health. This is a mistake, for muscles are used that are rarely exercised, and let me say here for my sisters who think themselves too large, there isn't any other exercise quite so apt to reduce your hips as the use of the hoe.

Do not attempt to hoe or do any other garden work without gloves. They protect your hands and while they may annoy you at first, you will become accustomed to them in a short time and find your hands are just as dexterous as when you work without them.

Work Systematically

The way to accomplish most is to work systematically. Cultivate your Lilies today and your Dahlias tomorrow. Never attempt too much at one time.

Now there is a reason for all this cultivation. When we break up the ground into rather small pieces, these pieces, being irregular in shape, overlap the pieces beneath them. Those below overlay the ones in the stratum of soil where the rootlets are embedded. This is the stratum we aim to keep moist. Therefore, the shadier this portion—or, in other words, the fewer sun's rays there are permitted to reach this portion—the more moisture there will be retained.

So by breaking up the soil we cause shadows to be cast which shade this lower strata; hence the tiny rootlets are kept moist and will get along with less water than they otherwise would. This is the reason the farmer devotes so much time to hoeing his vegetables.

In some cases where the plants are set out in rows you can use a wheel hoe. This makes the work less laborious. But when your garden is planted in group formation the hand hoe is necessary.

Care of Herbaceous Plants

From the middle of June until September the soil, especially among the herbaceous plants, should be turned over once in two weeks.

This constant vigilance also accomplishes comething else, which is a large factor in the attaining of a successful garden. It helps keep down the weeds. By turning them under you will kill them; fewer and fewer come up, and those that do come forth never make much headway.

If we would have our flower beds fulfill their mission and be really "things of beauty" from planting time until frost, we must give them care and attention, especially during July and August. During these months all seed pods and withered yellow leaves should be carefully pinched off. Florists believe in frequent stirring with a hoe, but not deep enough to injure the roots in any way.

It is an excellent idea every time you mow the grass to take a sharp spade and cut the edges of your flower beds. This practice keeps the grass from encroaching upon the beds and also keeps them in proper shape and form, giving them a fresh and neat appearance. There is nothing more unsightly than a flower bed with uneven, rough edges. It always detracts from an otherwise attractive effect.

Care of Coleus

Many of the soft growing foliage bedding plants, such as Coleus, Alternantheras and Achyranthes, should be cut back and not allowed to become straggling. The various colors should not be allowed to intermingle; this is easily prevented by constant pinching. The main point is to commence the work of pinching early, and take the tip out of the young growth. In this way you can scarcely see that the work is going on. If, however, you neglect them until they are very tall, then you leave stumps showing and the beds will be unsightly for a time.

Mulching

All beds and borders are very much benefited by a good mulching of well-rotted stable manure. It is necessary to shake out all the long straw before using; also chop it quite fine with the aid of a garden spade. Rose beds, Cannas, Gladiolus, hardy herbaceous borders and Verbena beds are all benefited by mulching.

It is not necessary to mulch soft plants such as Geraniums and Coleus, as they grow very well without it. The work of mulching is very simple: all you need to do is to spread the manure over the bed carefully to the depth of about 1 inch. This work pays in two ways, it keeps the roots moist and enriches the soil.

Watering

People are often puzzled about the watering of flower beds. There is no rule. It depends to a great extent upon the character of the soil and what you have planted in the beds. If the soil is good stiff loam, and you have frequent showers, you do not need to supply any water. If your soil is sandy and the weather dry it will be found beneficial to water every day.

Geraniums seldom need water when planted in good garden soil; with much water they grow too much and flower sparsely. Cannas require a rich soil and plenty of water. Coleus and plants of this character do not require much water. For them and Geraniums it is better to hoe frequently.

To water properly requires great care. If you use a hose, have just enough force to sprinkle the plants without watering the ground. Hold the sprinkler near the ground and see that the water goes just where you want it. In this way the ground will become thoroughly soaked.

In the evening after sundown is the best time to supply water, as the plants have all night to take up the moisture—for water is soon evaporated under the combined effects of wind and hot summer sun.

Chapter XXVIII

VINES FOR THE AMATEUR

A GARDEN, if it is to afford real comfort to its owner, must be to a certain degree vine-clad. It must have gay borders outlining smooth grass plots, shrubbery for its background and vines to ramble as they will, festooning pergolas and climbing trellises. All of these qualities a garden must have if it is to fulfill its mission and be as expressed in these beautiful lines of Dorothy Frances Gurney: "A lovely place of dreams and ecstasies, of color tangled in a verdant net."

The amateur's garden is usually a first garden and fairly bristles with newness. There is a certain lack of permanency about it, which, in time, when its owner learns to know his or her plants, completely disappears. These first months are usually months of adventures, which develop into tragedies or successes.

The most unrestful feature of such a garden is its total lack of shade. As it takes years, not months, to establish trees, let me urge every new gardener to plant at least one or two vines the first season. They will link the corners of your garden into one delightful unit and while thus adding to its beauty will add materially to its comfort.

Wisteria-draped Pergola

Can you imagine anything nicer on some warm June morning than shelling your peas or doing some necessary sewing out in the open under a Wisteria-draped pergola or Honeysuckle-clad arbor?

Rampant Growers

Vines are in most cases rampant growers and do not enjoy being fussed over, as do the plants in the borders. Of course, they demand supports but these need not worry you. Supports can be built of any light wood; in fact, any boy who attends a manual training school should have sufficient knowledge of tools to build an arbor, and while they require some painting to preserve the wood, two coats will be sufficient.

There are three vines I always advise gardeners to plant:

Clematis paniculata

The first is the Clematis paniculata, which blossoms so beautifully in late August. You surely know this vine with its wealth of fragrant white blossoms. All it requires is a fertile soil, a pergola, or other support, upon which to climb and an occasional drink in prolonged dry spells.

Bittersweet

The second vine is the Bittersweet, which, while worth while at all seasons, is particularly beautiful in the fall when its deep, burnt-orange fruit ripens. This vine, unlike most flowering varieties, does well in sun or shade and is perfectly hardy in all locations. Its flowers are a soft yellow and the foliage is a rather pale green. The Bittersweet is at its best when attached to a low iron or wire fence, or when planted in a place requiring protection from the sun, about a porch.

Hop Vine

The third vine that is always lovely is the old-fashioned Hop vine. It is a rapid grower and will cover a good-sized arbor in one season.

All three of these varieties will do well in sun or shade.

Where you have access to long spaces of brick walls, especially walls devoid of windows, let me urge you to make the "City Beautiful Movement" more than a dream, make it a reality and do your share by planting an Ampelopsis veitchi.

CLEMATIS PANICULATA

No daintie flowre or herbe that growes on grownd,
No arborett with painted blossoms drest
And smelling sweete, but there it might be fownd
To bud out faire, and throw her sweete smels al arownd.
—*Spenser*

Do not let any enthusiastic salesman inveigle you into choosing an Ampelopsis lowi. The lowi is not so rapid a grower nor has it the constitution of the veitchi. This is commonly called the Boston Ivy.

The Ampelopsis veitchi will never injure a wall, no matter how many years old it may be. Those of us who love the symmetry of this vine know this. Could we only convince other people that it is true, we would doubtless see an increase of 50 per cent of Ampelopsis planted each year.

This vine is such a rapid grower that in two years it will have grown 40 feet. It is restful and cool in summer, and beautiful when we come to the "Scotch plaid days" of autumn.

Of course there are other spaces besides blank walls to be covered—places where shade is a necessity. So many porches are almost useless during the day or evening without vines. During the day we are subjected to the blinding rays of the summer sun, and at night we suffer from the glare of nearby arc lights. In this case vines are a necessity.

Vines for City Planting

In the country, where vines have plenty of root room, we have an endless number of varieties from which to choose; but in the city, where the asphalt almost touches our porches we have little space for root development. Therefore, our choice is limited.

Honeysuckle

Where you want a real shield—in other words, a heavy growth of close foliage—there is nothing any better than the old-fashioned Honeysuckle. There are several varieties of Honeysuckle, each with a splendid constitution. This vine is so sweet that it seems a pity we do not see more of it. It has, however, one fault. It runs away from us if we are not careful. You really should prune it every time you cut the grass.

Cardinal Vine

The Cardinal vine is attractive for a porch, but it does not make as thick a growth as the Honeysuckle.

Moonflower

The Moonflower is also an interesting and really worth while vine to choose when we want protection from strong lights.

Virginia Creeper

The Virginia Creeper is also a wise choice. One never tires of its graceful, straying branches.

It is wise to set out your vines quite early so they will have time to develop some growth before the warm weather sets in. Most vines, you know, are rather rapid growers. It is well to water your vines every day the first year, and also keep all weeds or grass from encroaching on the soil about their roots.

The following vines will be sure to do well in a sunny location: Morning-glory, Kudzu (Japanese), Virginia Creeper, Dutchmans-pipe, Wisteria and Honeysuckle.

For a shady location, let me suggest Kudzu (Japanese), Dutchmans-pipe, Ampelopsis and English Ivy.

Chapter XXIX

SPRING BULBOUS STOCK

THE cultivation of hardy spring flowering bulbs is generally made a matter of mystery by the elaborate directions given for their growing; as a matter of fact, success with them is the simplest thing imaginable.

Soil

The first requisite is good soil. Then the bed must be well drained and you must have healthy bulbs, a sunny location, well protected with manure (or, when you cannot secure manure, leaves) during the freezing weather. These are the main points.

Place Orders Early

In July the catalogs are always obtainable and it pays to place your order early, for you know the ancient story of the early bird. By this time the bulbs have arrived in this country and the merchants will have them on their counters by mid-August.

In many localities where the falls are short and the winters long bulbs must be in the ground by early October. So, all things considered, this is the time to take account of stock and determine just how many bulbs you will need. By placing your orders early, you will be sure of having them filled. If you wait until later you may have to be satisfied with substitutes for certain varieties you wanted because the stock has become exhausted.

Another advantage in purchasing early is the fact that you always receive the first quality bulbs. Your orders will be filled from "first shipments." The first bulbs to arrive are always the largest and finest the growers have. The prices may fluctuate from year to year but prices during the season remain as listed, therefore you pay no more for your bulbs at this time than later. Should you not want the bother of having the bulbs around so long before planting, mention a delivery date when you order them.

Choose Dormant Bulbs

When choosing spring-flowering bulbs never select varieties that have sprouted. It is much better to select specimens that are quite dormant. The reason for this is that some energy has been expended on developing these shoots. When you plant the bulb you check this development because the shoots cannot develop in cold ground and when spring comes and the ground becomes warm the bulbs will begin to grow, but they will have expended some of their strength on these early shoots. For this reason they will not be quite as vigorous as they would have been had they remained dormant.

Select Heavy Bulbs

Another point worth considering is the weight of your bulbs. Always select heavy bulbs. They will be sure to do better than lighter ones.

If you took up your bulbs after they finished flowering, plant these in the least conspicuous places in your garden; for while they will do well they will not be likely to produce as large nor as fine flowers as will your new bulbs. It is better, as you can readily see, to plant the new ones where they can be most admired.

Named Varieties

It always pays to select named varieties when ordering bulbs. These may cost quite a little more than "assorted lots" but they are much more satisfying when you see them unfold

their velvety petals. They will be true to color and perfect in development. "Assorted lots" are usually collections of left-overs. They will, of course, be healthy and produce perfect flowers but until you see them in bloom you will not have any idea as to their color. As a result you may have far from a harmonious border.

One friend of the writer's purchased 100 assorted Tulips last season. When they flowered there were 75 rather indifferent white flowers and 25 very poor red ones. In fact, the reds were so nondescript in color that they were almost brown.

Smaller Varieties

The smaller varieties of spring bulbs are the ones we love the most and they grow without coaxing. The first bulbs to flower in the spring are the Snowdrops. Snowdrops bloom if we have a few warm days, before the snow has entirely melted. They do best in a sunny location and unlike the Crocus must have a decidedly rich soil. Many people do not know this and merely poke the bulbs in the grass plot; hence the complaints that they cannot grow Snowdrops. It seems well to plant them in groups of about five small bulbs (they are almost the size of a Freesia bulb).

Snowdrops

I always advise planting Snowdrops in a rather secluded spot, so that they will come up for years each spring and never be disturbed. In late fall a little manure spread over the group will do much to increase the size of the flowers but they will do very well without it. They do not take kindly to any disturbance, so it is wise to let them go their own sweet way. You will never grow tired of a few Snowdrops.

Crocus

The Crocus are joyous little blossoms and you will want some of each variety—yellow, blue and white. We do not wonder at the spring poets devoting pages to descriptions of the Crocus. They are so inquisitive, pushing their gay heads

SNOWDROPS—GALANTHUS

When spring unlocks the flowers
To paint the laughing soil.
—*Bishop Heber*

up through the dry soil long before they are expected. They do well in any exposure and do not require a rich soil or winter protection.

Scilla

The Scilla follows the Crocus in sending up its lovely long stems of sweetest blue flowers, very wee little bells, much like the Snowdrop in general shape of blossoms. The Scilla is easily grown. It likes sun but will do well in partial shade. While it does best in rich soil it will live and bloom in poor soil. I have never understood why more people do not know the Scilla. If they did they would surely have more of them, for they are about the least expensive of the spring-flowering bulbs.

Arrangement of Borders

Tulips, Hyacinths or Daffodils require a rich soil and a sunny situation. Daffodils are lovely in almost any location, they are so jubilant and happy. They live on quite contentedly for years in one spot. Tulips, especially the single varieties, are lovely for border planting. What could be more gorgeous than a path skirted on either side by a narrow border of scarlet Darwin Tulips? They are also beautiful when planted in plot formation. While circular formal flower beds are a thing of the past, nevertheless a circle of pink Tulips is sure to enhance the beauty of any garden. Hyacinths are never at their best except when planted *en masse*. They lose much of their charm when scattered here and there.

Hyacinths

Be sure when planting Hyacinths to set out some Roman varieties. These, while not as showy, are more graceful than the other varieties. And be sure to plant a generous number of Narcissus. There are many varieties of Narcissus—each more lovely than the other. The Narcissus is one bulb that will flower under the most adverse conditions. It is the most dependable of all the spring-flowering bulbs.

When Their Bloom is Spent

When your bulbs are through blooming, let them alone in the ground until you need the border for other plants, you can then lift them and place them in a dark, dry place to rest until the following fall, when they may be replanted. The second season they may disappoint you, for they will not flower as profusely as they did the first season and their flowers will be smaller, but have patience—the third season they will again bloom most gorgeously.

Spring-flowering bulbs have spent their beauty and their tops have died down. The question arises in the minds of so many: "What next? Shall I lift them? Or can I leave them where they are?"

In answer, let me say that whether you leave them in the open or lift them depends, to a certain extent, on the amount of ground you have at your disposal to devote to flowers and the care you expend on your garden.

The bulbs are now resting and they can do this almost as well in the ground as if you lift them, dry them and replant them in early October. In their natural habitat they rest in the ground.

Summering Your Bulbs

However, when you want your borders for other plants it is wise to lift your bulbs, keeping the plants separate. Shake as much soil as possible from the roots, then lay them on several layers of newspaper in the sun to dry. Occasionally turn them while they are drying, to avoid one side becoming mildewed or "damp," (a term the florists use when a bulb perspires), for if they "damp" they begin to decay.

Keep them in the sun for at least ten days and then hang them in baskets in any dark, dry place. It is quite unnecessary to wrap each bulb in paper.

Some one at this point may ask why you cannot plant between the bulbs in the border, since they do not take up much room. The bulbs do not take up much room and you can get

your garden plants between them, but can you take a spade or even a small trowel and attempt to dig up the soil in which spring bulbs are planted and not injure the bulbs? You cannot. Even with care, you are sure, in digging lower for other plants, to strike a bulb occasionally and when you do this you injure it.

Necessity of Careful Handling

Bulbs are rather delicate and are more easily injured than fibrous plants. It pays, therefore, in all cases, except two of which I shall speak later, to lift your bulbs and replant them in the fall if you need the space. Bulbs have not been cheap the past few years, so aside from being a more practical plan, this is also a much more economical one.

Plant Crocus and Snowdrops Among the Grass

You know it is the exception in all cases that is said to prove the rule, and in this case the exceptions are the Crocus and Snowdrop. These bulbs when well placed are always planted in the grass plot. The bulbs of these varieties are so small that they really take up no room; therefore, you do not injure the roots of the grass when you stick them in the ground. When they have ceased flowering you can mow right over them and not do them the slightest injury.

These two varieties for some unknown reason rest better in the open, so in all cases it is best to forget them until spring when they will poke their lovely, cheerful heads up through the frozen soil long before you are expecting them.

Of course when you have a great deal of ground and do not have to use the same borders for summer flowers that you used a few weeks earlier for bulbs, you do not have to lift your bulbs, no matter what varieties you have planted. But as few of us have so much space it is wise in most cases to lift and later replant them.

Chapter XXX

YOUR FLOWER BORDER IN SEPTEMBER

HOT weather, such as we usually have in August, is hard on Larkspur. About this time a fungous growth is apt to attack the crowns of the plants. The first indication of the disease is that you will notice the plants beginning to wilt. The malady can be easily checked by spraying thoroughly with a lime and sulphur solution. It is well to spray not only the plants but the surrounding growth as well.

In early September it is a good plan to spray your Chrysanthemums for black aphis, which are enticed by the young growth of these plants. You can soon rout the enemy with a solution of nicotine sulphate. In some sections of the country grasshoppers show a decided liking for the foliage of Chrysanthemums. To chase these enemies, spray with arsenate of lead.

Transplanting Perennials

Early September is the time to transplant perennials to permanent quarters so that their roots may become firmly established before frost.

Pansies that are to be wintered in the open can, before frost, be covered with straw, pine needles or dried autumn leaves.

Pansies that have been flowering in your borders all summer should now be cut back, which will insure a second crop of fair-sized flowers the latter part of the month. They will be further benefited by having some bonemeal worked into the soil about their roots.

Save Seeds of Larkspur, Gaillardia and Pyrethrum

Be sure to save the seeds of Larkspur, Gaillardia and Pyrethrum, for these seedlings frequently produce larger, finer flowers than do the parent plants.

This is a good time to prepare your bulb beds. Spade them deeply and literally, as far as possible, pulverize the soil. Mixing a little bonemeal with the soil will be beneficial; about a quart to four square yards will be sufficient. Should the soil seem heavy, mix some sand with it.

Madonna Lilies can be planted up to the twelfth of the month.

Dividing Iris

This will be your last chance to transplant and divide Iris. After the tenth of the month I would not advise it. It is also as late as I would advise transplanting Oriental Poppies.

About this time your Achillea will be greatly in need of stimulation. Better apply some liquid manure to their roots. This will assure you a second crop of blooms.

Salvia, which lends such brilliancy to the early Scotch plaid days, will be also benefited by a small quantity of liquid manure.

Chapter XXXI

WHEN THE SCOTCH PLAID DAYS ARE COME

THIS is the proper time to think about lifting and storing bulbous and tuberous-rooted plants for the winter. This work must be done with care. Dahlias should be carefully labeled, having the name firmly attached to the main stem. Cut off the tops about a foot from the ground. After the tops are off rake them into piles and burn them. This prevents the spread of blight or disease and also destroys any insect eggs.

After the tops are cleared away dig the tubers, shaking off all excess earth, and place them in a sunny place to dry. When absolutely dried they are ready to store away in a warm, dry place until next spring.

Cannas

Cannas should be cut off as close to the ground as possible, the clumps dug, torn apart and thoroughly dried. If you do not shake them apart they will never dry properly. When quite dry store them in a moderately warm place.

The old-fashioned common varieties will keep very well in this condition until spring. When storing Cannas always pack them closely together with the roots up. This in a large measure, will prevent them from starting growth and will keep the roots from starting to decay.

French Varieties

The beautiful French Cannas, introduced during the last few years and now so very popular (grown for their great, gorgeous heads of bloom and wonderfully free flowering qualities) require the same treatment as do the other varieties, but they will not keep alive dormant until spring as do the common kinds. They require special attention and if they do not receive it when spring comes they will be shriveled. They do not have the same vitality as do the older varieties.

French Cannas must be looked over about the latter part of February or early March. As soon as you notice that they show the remotest sign of withering get to work and clean off the roots and plant them in a shallow box. At first give them merely sufficient water to prevent them from shriveling. As the spring advances increase the moisture. If you follow this method, the plants will be well rooted and in good condition when planting-out time comes, which is usually about June 1st. Such plants, when set in permanent locations in the garden, never fail to start at once to push out vigorously under the influence of warm sunshine and early summer rains.

Never keep Cannas where there is the slightest danger of frost.

Should you have a large bay window or conservatory that is kept moderately warm, with a temperature of 60 to 65 degrees, and you are really fond of Cannas, you can pot some of the dwarf varieties. Under such conditions they will bloom beautifully all winter. Of course their height of growth prevents them from being adaptable to small, low windows.

By following these directions it is an easy matter to keep any or all varieties of Cannas over the winter.

Planting Shrubs

If you were too busy to plant the shrubs you wanted in the spring, do not wait for another spring to roll around before

doing so. Try and get them into the ground in the fall, then when spring arrives you will have well established bushes.

You see, by setting the shrubs out in September they will have fully two months more growth than they would have if you had waited and planted them in the spring. This means that they will have developed sufficient strength to withstand the heat and drought of their first summer which is frequently fatal to newly planted shrubs. And as a last argument in favor of fall planting, we usually have more time and a better opportunity to see the open gaps in our gardens than when things are dormant.

Think what it will mean when spring comes to see these bushes begin to unfold their beautiful colorings before the last snowpile has melted. It will mean flowers the first year instead of the second.

Spireas

Any of the Spirea family, if planted in the fall, will blossom the next spring. In selecting Spireas be sure to find out just when the variety you are purchasing will bloom, because there are three classes of this worth while shrub: spring-flowering, summer-flowering and fall-flowering. All are hardy; all have vigorous constitutions and all are beautiful. And let me urge my readers when planting to add to the shrubbery of their gardens the winter varieties.

Berry Bearing Varieties

Many of the deciduous shrubs are ornamental in their outlines or bear winter berries, thus adding a bit of color to the winter landscape. And we should never overlook the evergreens, especially the low growing varieties. They add so much to the charm of our gardens in the winter. They not only offer shelter to the birds but by the depth of their dark green, lustrous foliage do much to relieve the dreary bleakness of winter.

Evergreens

All evergreens must be planted while in a dormant state, therefore you must wait until the last thing before frost to set out conifers.

Evergreens should be well watered at the time of planting and must be kept wet for at least a week after planting. Another point to be emphasized is to disturb their roots as little as possible. This is the reason the nurseries always ship shrubs with huge balls of soil about their roots. When planting, this soil should be kept intact.

INDEX

THE INDOOR FLOWER GARDEN

PAGE

Abutilon 53
Air, Fresh 13
Amaryllis 46
Aspidistra 38
Atmosphere 13
Basket Plants 33
Begonias 31, 49
Bellflower, Chinese 53
Birdsnest Fern 41
Calceolaria 48
Callas 55
Cherry, Jerusalem 54
Chinese Bellflower 53
Cinerarias 53
Cornplant 40
Crotons 42
Cyclamen 45
Dracaena 40
Drainage 8
Exposure 11
Ferns 34, 35
Ficus elastica 41
Flowering Maple 53
Flowering Plants 43
Foliage Plants 12, 29, 38
Fuchsias 56
Genista 52
Geraniums 43
Heliotrope 52
Iron Plant 38
Ivy, Kenilworth, as a basket plant 34
Jerusalem Cherry 54
Kentia Palm 40
Maidenhair fern unsuited for house culture 36

PAGE

Maple, Flowering 53
Mock-orchid 45
Nasturtiums 53
Nephrolepis 36
Overpotting 6
Palms 40
Pandanus 40
Petunias 51
Poinsettias 57
Potting 4
Primroses 43

Propagation—See under "The Outdoor Flower Garden."

Repotting 4, 5
Rubber Plants 41
Sedums as basket plants 34
Showering 10
Slipper-flower 48

Soils:

- Bonemeal for 3
- Friable 2
- Grass Root 2
- Leafmold for 2
- Mixing 1
- Sand for 3

Spiraea 54
Stunted Plants 20
Summering House Plants 59
Sunshine 11
Tradescantia as basket plant 34
Transplanting 5
Ventilation 13
Watering 7
Window Boxes 30

THE OUTDOOR FLOWER GARDEN

PAGE

Achillea....145
Achyranthes....130
Almond, Flowering....121
Alternantheras....130
Alyssum.... 95
Ampelopsis....133, 136
Anemone japonica.... 75
Ants.... 19
Aphis.... 20
Arsenate of Lead for Rose Bugs.. 18
Asters.... 93
Azalea....61, 121
Baby Ramblers....111
Barberry....121
Beetle, Japanese.... 17
Begonias....125
Berberis....121, 122
Bisulphide of Carbon for Ants.... 19
Bittersweet....133
Blight.... 18
Border, Early work in the.... 67
Bulbs, Spring blooming....125, 137
Bulbs, Winter storing of....146
Campanula....113
Cannas....146
Canterbury-bells....113
Cardinal Vine....136
Chrysanthemums....116, 144
Clematis....133
Coleus, Care of....130
Coreopsis.... 97
Cosmos.... 96
Crocus....139, 143
Cultivating the Garden....128
Daffodils....141
Dahlias....88, 146
Daisies, Michaelmas, Increasing.. 26
Delphiniums.... 99
Deutzia....121
Dutchmans-pipe....136
Enemies of the Garden.... 16
Evergreens....149
Ferns, Hardy....125
Flag.... 76
Forget-me-not....97, 124

PAGE

Forsythia....121
Gaillardia....145
Geraniums for the window box.. 29
Gilliflower....115
Gladiolus.... 89
Green Flies.... 20
Hardy Herbaceous Stock.... 70
Herbaceous Stock.... 70
Hoeing.... 16
Honeysuckle....135, 136
Hop Vine....133
Hyacinths....141
Hydrangeas....123
Insects, Scale.... 17
Iris....76, 145
Ivy, English....136
Japanese Beetle.... 17
Kerosene Emulsion.... 17
Kudzu Vine....136
Larkspur....99, 144, 145
Lawn Making.... 63
Lice.... 17
Lilac....121
Lilies....83, 145
Marigold.... 96
Mealy Bug.... 20
Mignonette.... 97
Moonflower....136
Morning-glory....136
Mulching....131
Myrtle....124
Nasturtiums.... 96
Pansies....30, 113, 144
Parsley.... 32
Peonies.... 80
Petunias.... 97
Phlox....26, 72
Poppies, Oriental....25, 145
Privet....122

Propagation
From cuttings.... 24
Root divisions.... 25
Seedlings.... 22
Other methods.... 25

PAGE
Prunus....121
Pyrethrums....97, 145
Ramblers, Baby....111
Red Hot Poker.... 72
Red Spider.... 20
Rhododendrons....122
Roses....105
Aphis on....109
Arsenate of Lead for Rose bugs. 18
Baby Ramblers....111
Bugs on....18, 109
Green fly on....109
Mildew on....110
Paris Green for Rose bugs.... 18
Planting....106
Pruning....107
Slugs on....18, 109
Soil, Preparation of....106
Tobacco for Rose bugs.... 18
Varieties, Reliable....110, 111
Rust.... 18
Salvia....145
Scale Insects.... 17
Scillas....141
Seedlings, Thinning.... 15

PAGE
Shaded Places, Flowering Plants and Ferns for....124
Snowdrops....139, 143
Spiraea....74, 121, 148
Seedlings, Thinning.... 15
Shrubs....120
Stocks....115
Sweet Alyssum.... 95
Sweet Peas....102
Sword Lily.... 89
Syringa....121
Tobacco for Rose bugs.... 18
Tritoma.... 72
Tulips....141
Vines....132
Virginia Creeper....125, 136
Watering....131
Weeds.... 15
Whale-oil soap.... 17
Windflowers, Japanese.... 75
Window boxes.... 27
Winter storing of bulbs....146
Wisteria....136
Worm destroyer.... 18
Zinnias....115

ILLUSTRATIONS

PAGE
Petunias and Climbing Vines Frontispiece
Illustrating method of removing plant from pot.... 4
Window box.... 28
Aspidistra.... 39
Calceolaria.... 49
Tritoma.... 73

PAGE
Japanese Iris.... 77
Peony.... 80
Lilium auratum.... 84
Dahlia.... 90
Sweet Alyssum.... 94
Delphinium....100
Sweet Peas—Spencer type....102
Clematis paniculata....134
Snowdrops....140